THE Soybean Digest

EXCLUSIVE!

Soybean Oil in the Human Diet

A comprehensive report by Dr. J. B. Brown of Ohio State University

Soybean oil and heart disease

The need for a completely edible oil

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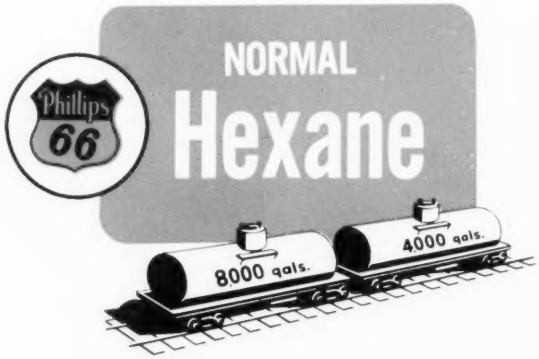

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THE Soybean Digest

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THE SOYBEAN DIGEST

EDITOR ..... *Geo. M. Strayer*
MANAGING EDITOR ..... *Kent Pellett*
BUSINESS MANAGER ..... *Geo. McCulley*
DIRECTOR OF CIRCULATION
Delmar C. Cobie

OFFICES

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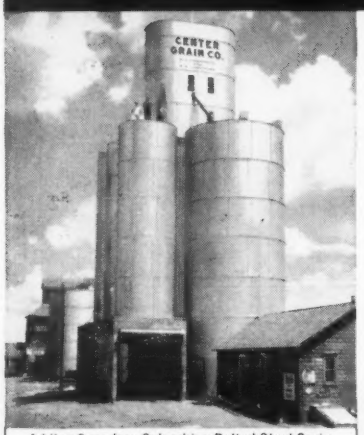

Adding 3 modern Columbian Bolted Steel Grain Tanks to an old elevator in 1954 paid Center Grain Co., Oberlin, Kansas, so well that in 1957 4 new storage tanks, 3 blending tanks and overhead driveway facilities were added to make the elevator completely modern. Erected by Nichols Construction Co., Oberlin.

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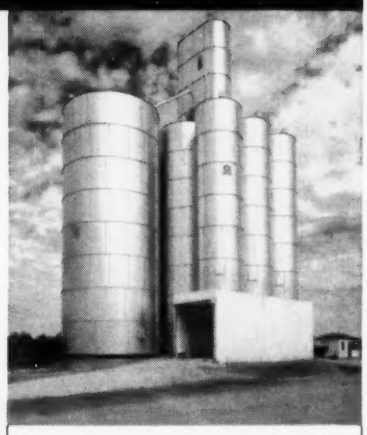

Modern 115,000 bu. elevator of Burlington Elevator Co., Hebron, Nebraska, a Columbian "Look Ahead" expansion and modernization project. The "all gravity" operation saves costly machinery. Erected by Jones Construction Co., Grant, Nebr.

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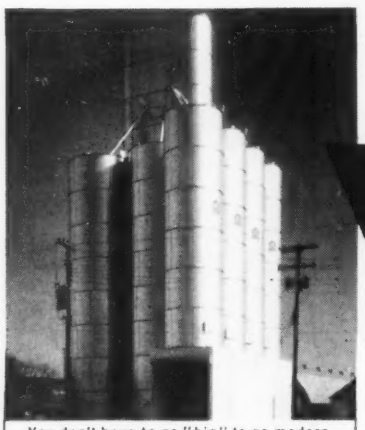
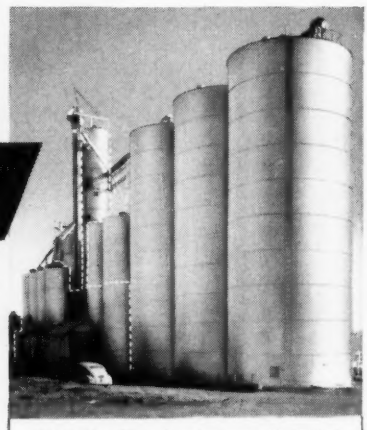


You don't have to go "big" to go modern. Riverdale Grain Co.'s 60,000 bu. capacity elevator has 4 main tanks, 4 classifying and blending tanks and an efficient headhouse. Note truck driveway under tanks. Erected by Jones Construction Co., Grant, Nebr.



"Look Ahead" engineering pays off. Dotted lines show Columbian-planned 75,000 bu. elevator built in 1946 now incorporated into new 250,000 bu. modern installation of Lafayette Mill & Elevator Co. at Lexington, Mo.

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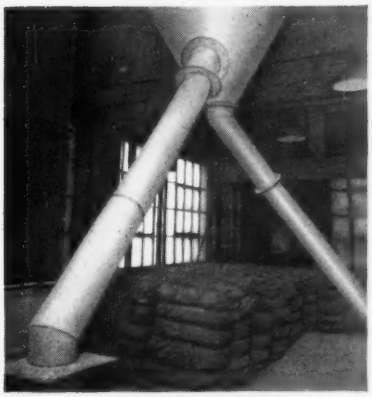

RIGHT: Spencer Kellogg & Sons employee making classification adjustment on Sturtevant Air Separator in operation at Bellevue, Ohio, soybean meal plant. Separator minimizes air-borne dust losses while removing hulls and classifying end product.

LEFT: Two lead-off chutes at bottom of Sturtevant Air Separator in Spencer Kellogg & Sons plant. One chute in the closed circuit system sends to packaging all uniform size, dust-free meal while the other returns all undersize fines for pelletizing.

Closed Circuit Air Separation Cuts Losses, Keeps Plant Cleaner, Improves End Product

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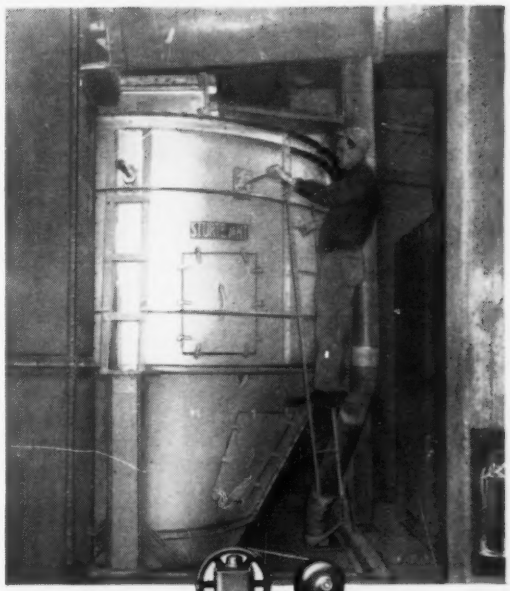

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The fats of life and soybean oil

Soybean oil could supply up to 60 or 70 percent of essential fatty acids in the American diet, but most EFA are destroyed by hydrogenation, says the author. The problem of producing edible, unhydrogenated soybean oil is still largely unsolved

By J. B. BROWN

Director, Institute of Nutrition and Food Technology, Ohio State University. From his address before the American Soybean Association convention in Minneapolis.

UPON MY arrival at your meeting I was immediately impressed with the almost evangelistic fervor of your Association in behalf of soybeans. This attitude is quite proper because the soybean is not only unique in the U. S. farm economy but is also in a class by itself nutritionally, providing as it does perhaps the best of the vegetable proteins, comparing favorably with animal proteins in its amino acid composition, and also, in large amount, an oil unusually rich in unsaturated fatty acids.

Like some other persons on your program, I was originally a farm boy in northern Illinois, but in those days we knew nothing of the soybean. My first experience with soybeans was in trying to raise the edible variety during the second world war. In our fat laboratory at Ohio State we have worked many times with soybean oil and we have known for a long while of its potentialities as a food product as well as a raw material for commercial products.

The importance of soybean oil in our fat economy can be seen from an estimate of predicted fat production (U. S.) for 1956, published last year by the U.S.D.A. All values are in millions of pounds (See bottom of first column.)

Butter	1,600
Lard and pork fat	2,625
Edible beef fat	275
Edible vegetable oils*	6,453
Soap fats**	3,065
Drying oils	687
Others	30
Total	14,735

* Plus oil equiv. of seed exported. ** Inedible animal fats and marine oils classed.

Soybean oil is classed in the preceding table as an edible vegetable oil. Actually the production of soybean oil, as oil, amounts to more than 3 billion pounds, or nearly one-fourth of our total visible fat production. Most of this is used in food products. As will be emphasized later, most of it is profoundly changed in composition by hydrogenation before use as food.

Why Fats Important

From many points of view the fats are important in the human diet, and in fact in animal diets generally. In the first place, of all the nutrients required by man, fats are the most concentrated form of food energy, this energy being required to keep us warm, and to allow us to move about and in fact to keep alive. Fats when oxidized in our bodies provide per unit weight two and one fourth times the energy derived from either carbohydrate or protein. On the average, in the United States, fats provide over 40% of our total energy requirement. Researchers in the late Harry Deuel's laboratory and others have shown that the mere metabolizing of fat calories enhances the efficiency of utilization of protein and carbohydrate.

Certain of the fats incidentally contain fat-soluble vitamins. Thus, butter and eggs (oil of the yolk) are fair sources of vitamins A and D. The margarines are usually fortified with vitamin A. The fats of marine fish often contain relatively large amounts of these vitamins. Most fats and oils contain vitamin E, including soybean oil. Still another contribution of fats in the diet is their favorable influence on the absorption of the fat-soluble vitamins; on low fat diets or in conditions where fat is poorly absorbed (pathological), absorption, and hence availability, of the fat-soluble vitamins is impaired.

A most important contribution of the fats in animal nutrition is their content of the so-called essential fatty acids. These must be provided in the animal diet and will be discussed at length later.

Still further contributions of dietary fats are flavor and effect on texture of foods, both probably important in digestion. Foods with desirable flavor presumably enhance digestion by promoting the flow of the digestive juices. Some fats have so characteristic a flavor as to be important in stimulating their use, as for example butter, and the carrying over of butter flavor into margarine. The effect of fats on texture (shortening values) seems self-evident. The shortening industry is dependent on this property of fats in bake goods.

A questionable factor in the nutritive value of fats is their content of cholesterol or sitosterol. Cholesterol is found generally in animal fats to the amount of a few tenths of a percent. Two foodstuffs, brains and egg yolks, contain about 4% and 1% respectively of cholesterol. Feeding certain species such as the chicken and rabbit with diets high in cholesterol has been shown to cause a rise in the cholesterol level of the blood and condition known as atheroscle-

rosis. Recent work, however, would seem to indicate that the cholesterol of our diet is not a significant factor in this disease. The vegetable fats, including soybean oil, contain sitosterol, which is largely unabsorbed in man and so far as we know is insignificant as a nutrient.

From the preceding discussion, it may be concluded that the fats are indeed "the fats of life," that they make several broad contributions to our nutritive state and that they are actually required in our diet. Thus, it is inconceivable that we consider the fat-free diet. Further, even a relatively low fat diet is likely not desirable. Far from the low fat diet, it has been estimated that we in the United States are eating nearly 100 pounds of fat per person per year, or about 140 grams or nearly 5 ounces per day; or, as mentioned previously, over 40% of our calories is derived from fat.

The 100 pounds of fat per year is roughly divided into visible and invisible of which visible fat makes up about 45 pounds. This is the fat we eat as lard, shortenings, butter, margarine and vegetable oils.

Essential Fatty Acids

The concept of essential fatty acids (EFA) originated from work done at the universities of California and Minnesota. It was shown experimentally that rats on a fat-free diet, but supplied other known nutrients, developed a scaly condition of the tail and a general dermatitis, and failed to grow. The condition was prevented or cured by adding fats to the diet and specifically two of the polyunsaturated fatty acids, linoleic and linolenic acids. Later, arachidonic acid was added to the list. The chemistry of these compounds and their occurrence in nature may be shown as shown above.

	Formula	No. of carbon to carbon double bonds	Occurrence
Linoleic acid	$C_{18}H_{32}O_2$	2	Veg. oils, corn, cottonseed, soybean, etc.
Linolenic acid	$C_{18}H_{30}O_2$	3	Linseed (45-55%) Soybean (3-7%)
Arachidonic acid	$C_{20}H_{32}O_2$	4	Traces in all animal fats

In still later work the EFA have been shown to be required by several other species, such as the mouse, fowl, dog, and others, but the need for these nutrients has not been proved in man, mainly because of the difficulty of setting up the needed experiment. Human body fat contains 5-7% of EFA, mostly as linoleic acid; the average adult will contain about 1½ pounds of these acids, derived from his normal diet. EFA deficiency disease in man is almost unknown, but there is good evidence that it is not uncommon in infants. Quite likely, lack of EFA may occur in man under extreme pathological conditions where fat is not absorbed properly. As will be mentioned later, in addition to the need for EFA to prevent fat-deficiency conditions, there is recent evidence that the EFA and perhaps other polyunsaturated acids (many double bonds) provide a bonus in good health in that they tend to lower the blood cholesterol level.

Within the past 5 years, it has been shown that arachidonic acid is the central EFA, linoleic acid of the diet being converted by the liver into arachidonic acid, a process which requires vitamin B-6, pyridoxine. This development is important, because arachidonic acid occurs in dietary fats only in very small amount, but the supplies of linoleic acid in the vegetable oils are abundant. To a person with normal metabolism and getting adequate amounts of B-6, dietary linoleic acid is fully as effective as arachidonic acid. Incidentally, linolenic acid is only partly effective.

J. B. Brown

The following table shows the fatty acid compositions of two oils which are commonly used, following hydrogenation, in the formulation of margarines and shortenings. Corn oil is most often used directly as a salad oil or liquid shortening, and resembles cottonseed oil in composition.

Fatty acid composition of oils used for margarines and shortenings

Fatty Acid	Cottonseed* per cent	Soybean per cent
Myristic	1.4	.....
Palmitic	23.4	6.5
Stearic	1.1	4.2
Arachidic	1.3	0.7
Oleic	22.9	33.6
Linoleic	47.8	52.6
Linolenic	.....	2.3

* Tetradecenoic 0.1; hexadecenoic 2.0.

Corn and cottonseed oils will contain from 47-53% of linoleic acid. Soybean oil may contain 55% or more of linoleic and linolenic acids, making it slightly more potent as a source of EFA than the other two. Unfortunately, the small amount of linolenic acid present in soybean oil presents problems in providing an oil for direct use as food, namely, flavor reversion and low stability (unless hydrogenated). For this

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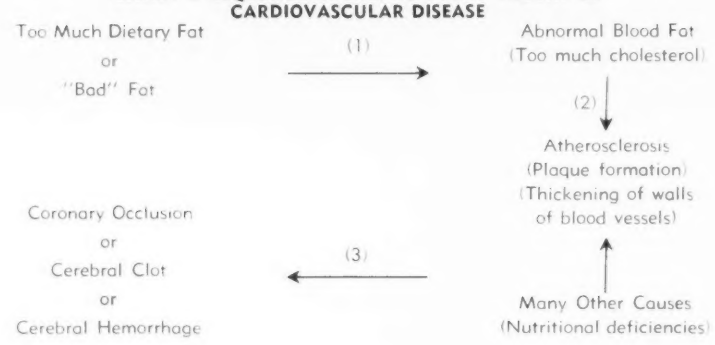
reason little or no soybean oil is used directly (without hydrogenation) as are cottonseed and corn oils.

In recent years the important positive role of fats in nutrition has been beclouded in both the scientific and lay press by the allegation that dietary fats may cause cardiovascular disease and the apparent increase in fatal coronary attacks in America. Thus, it has been noted that in 1910 we were eating about 32% of our calories as fat while in 1957 this has risen to 44%. During this period there was an alleged corresponding rise in number of deaths from coronary disease. Among the current causes of death, cardiovascular disease, as manifested by heart attacks, cerebral hemorrhage and the like, rates high at the top of the list, making up 60-65% of the total deaths in adults. Cancer is a poor second. It is clear that any important clinical cure or prevention of cardiovascular disease and cancer may well raise the life expectancy in the United States from the present 70 years to perhaps 90-100.

At this point let me present the background of the fat theory of the origin of atherosclerosis, and examine its validity briefly. Obviously, if fats are in fact poison to us, either in kind or amount, wide propagandizing of this fact (as actually has already been done in both lay and scientific press) will have repercussions economically to fat producers, the U. S. farmer, and plans for economic adjustment to produce less fat will have to be explored.

In presenting this theory, I shall follow the general outline of the theory originally suggested to me by Dr. E. H. Ahrens, Jr., of the Rockefeller Institute. The discussion of this theory, however, is entirely my own. The sequence of events in the theory is shown above.

CHART I. SEQUENCE OF EVENTS IN FAT THEORY OF CARDIOVASCULAR DISEASE



In step 1 of this theory, it may be explained that cholesterol occurs normally in blood. Either too much dietary fat or "bad" dietary fat raises the level of cholesterol in the blood. Cholesterol intake in the food has little effect.

Cholesterol is a normal constituent of all body tissues, is normally synthesized in far larger amount than is ever eaten, and is required by the body in the synthesis of many vitally important compounds.

Both laboratory studies on men and population statistics indicate that the level of cholesterol in the blood is markedly affected by the amount of fat eaten. Thus, by simply reducing our fat intake we can lower our blood cholesterol possibly by as much as 20%.

What is a Bad Fat?

The expression "bad" fat can be explained thus. Certain kinds of dietary fat produce higher blood cholesterols than others, at comparable levels of intake. Several competitions have been mentioned in scientific and lay literature.

Blood cholesterol levels

Higher (undesirable?)		Lower (desirable?)
Animal fat	vs.	Vegetable fat
Saturated	vs.	Unsaturated
Solid (fat)	vs.	Liquid (oils)
Low EFA	vs.	High EFA
Hydrogenated	vs.	Natural oil

It is difficult without presenting a mass of evidence to discuss the above expressions adequately. Actually the first four competitions above overlap in many respects. Thus, the animal fats which are most commonly eaten in this country are beef, mutton and pork fats and butterfat. These are solid fats, contain preponderant amounts of saturated fatty acids (palmitic and stearic) and only very small amounts of EFA. On the other hand, our edible vegetable fats, corn, cottonseed and peanut oils, contain largely unsaturated fatty acids (oleic and linoleic), are liquids (hence their being referred to as oils) and are rich in EFA (linoleic acid).

Soybean oil is unique in this picture. As noted previously it is used as food after hydrogenation. When hydrogenated, composition of the resulting product is profoundly changed so that, while the product is solid, it presents the anomaly of being largely unsaturated but still very low in EFA, behaving thus in its effect on serum cholesterol like the saturated or animal fats. Without reviewing the evidence it may be concluded that one can lower his blood cholesterol perhaps as much as 20% by eating less fat, by eating vegetable oils rather than animal fats or hydrogenated fats, and perhaps by eating more of the so-called EFA.

Prominent physicians have proposed that our fat intake be reduced from 40% to 25% of the total calories. If this were done by all of us in the United States at the expense of visible fat intake, an overproduction of up to 3 billion pounds of fat would result. The American Soybean Association should be interested in this fact as an economic problem. Many nutritionists, on the other hand, are aware of the difficulty of trying to so alter the American diet, even if it were found eventually to be desirable.

In explanation of step 2, Chart I, it may be stated that atherosclerosis is a pathological condition of the blood vessels, characterized by a thickening of the vessel wall and formation of a roughened area or so-called plaque on the inner surface of the vessel. Both the wall of the vessel and the plaque are rich in fatty substances, especially cholesterol. The fats of the plaque resemble those of the blood. For this and other reasons it has been claimed that high blood

cholesterol is the cause of the thickening and plaque.

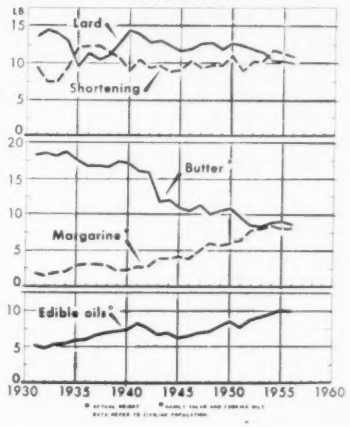
Actually, pathologists have advanced many other possible causative factors for this condition, including several nutritional factors. Thus, at its worst, fats and blood cholesterol levels are only one of several possible causes of atherosclerosis. Actually, we do not presently understand what causes this condition, which tends to develop normally with age, and which is probably universal in elderly persons.

Step 3 in Chart I is poorly understood. A blood clot forms in a blood vessel of the brain (cerebral occlusion) or in a coronary vessel (coronary occlusion) or there may actually be hemorrhage or rupture of a vessel in the brain, due to weakening of the blood vessel walls. The vascular accident (so-called because it happens at some given moment for no presently known reason) occurs usually at some spot on a plaque. The factors or factor precipitating clot formation are almost completely unknown, but presumably the atherosclerotic lesion always antedates the attack. Further, it has been shown statistically that coronaries are more frequent the more severe the development of the atherosclerotic condition. Unfortunately, there is no satisfactory diagnosis for atherosclerosis; hence, nothing much can be done about preventing step 3 of the theory.

Fat Important Factor

Summarizing, there is considerable but not conclusive evidence to show that our blood cholesterol can be lowered somewhat by eating less fat or by choosing the right kind of fat, i.e., one rich in unsaturated and especially the essential fatty acids. On the other hand, it is not certain that reduction in blood cholesterol level by 10-20% will prevent to any important degree the onset of atherosclerosis. Finally, we are not certain that dietary fat is an important factor in thrombosis or blood clot formation. Thus, the fat theory of the origin of atherosclerosis is still open to serious doubt, but all agree that dietary fat is one of the important factors in coronary disease. Many nutritionists feel that answers to the numerous problems in this field should be forthcoming before recommendations be made to "eat less fat." The writer feels, on the other hand, that there is sufficient evidence at hand of a circumstantial nature to justify some lowering of the fat intake and, where possible, the use of fats rich in EFA.

DISAPPEARANCE OF FOOD FATS PER PERSON



Having now covered the first part of my assigned subject, "The Fats of Life," let me relate soybean oil to this picture. Here, unfortunately we find tremendous amounts of soybean oil available for use as food but most of it being used only after hydrogenation, a process which rather completely alters it. In a chart just issued by the USDA there is shown the disappearance of food fats in the U. S. (See chart above.)

On the basis of 170 million people the figures in the chart for 1952 may be approximately stated as follows (in billions of pounds):

Butter	1.36
Margarine	1.10
Shortening	1.85
Lard	1.65
Edible oils	1.70

The edible oils, used in the form of salad oils and liquid shortenings, are mainly corn, cottonseed and peanut. An additional 3.1 billion pounds of cottonseed and soybean oils are hydrogenated and formulated into margarines and solid shortenings. Of this nearly 2 billion pounds of soybean oil is hydrogenated. While a good deal of cottonseed oil is used as edible oil without hydrogenation, very little soybean oil is thus used, mainly because of certain specific technologic problems which are mainly the result of the few percent (3-8) of linolenic acid present in the oil. It becomes important then to discuss briefly the changes brought about by hydrogenation.

Hydrogenation Results

Hydrogenation of soybean oil is usually only partial. If it were complete, a high melting mixture of saturated glycerides of palmitic and stearic acids would result. The product would be solid at body temperature and very poorly digested and absorbed. As commonly carried out, hydrogenation is only partial, resulting in four types of chemical change.

1. *Addition of hydrogen to double bonds*, resulting in a rise in melting point and lowering of the iodine value. Starting with linolenic acid, and adding hydrogen to each double bond, one at a time, the products would be, in turn, fatty acids with two, with one and with no double

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bonds. The last of these would be a saturated acid, stearic acid.

2. *Shift of position of double bonds.* There is no change in iodine value, but there is the possibility of formation of innumerable iso-acids not present in the oil originally.

3. *Cis-trans isomerization*, resulting again in iso-acids, largely of the trans type. Cis forms of the acids are the ones which occur naturally. Trans forms are much higher melting, but have the same iodine value. Thus, a margarine or shortening may have an iodine value about that of olive oil, but still be solid at room temperature.

4. *Formation of conjugated systems* with fatty acids of two or more double bonds. Here the unsaturations are not separated from each other by a methylene group, as is the case of the natural non-conjugated acids. Fortunately, acids of this type are formed only in trace amounts.

As a result of these changes the fatty acids of margarines and shortenings formulated from partially hydrogenated soybean oil are an extremely complex mixture of natural and iso-acids. Recent work in our laboratory has pointed out that typical products, purchased on the market, contain from 25-40% of trans acids (none were present originally). The linoleic acid (EFA) content of these products has been 90-95% destroyed (originally about 50%; after hydrogenation 3-8%). The iso-acids of margarines and shortenings may amount to as high as 60% of the total acids. It is fortunate indeed that there is little or no evidence that these unique acids do not metabolize normally in the animal body. The hydrogenated fats have been shown, however, to support a high blood cholesterol level like the solid animal fats such as butter, beef fat and lard. The principal damage known to be caused by hydrogenation is the serious loss of EFA.

If 2 billion pounds of soybean oil, containing 55% of linoleic and linolenic acids, is hydrogenated as commonly practiced, it would represent a loss of 900 million pounds of EFA annually. This loss would mount to well over a billion pounds if both soybean oil and cottonseed oil are considered, or about 6 pounds of EFA per person per year. Such a loss may have important health implications for the American people.

Comments in Summary

In summary may I make several general comments of special interest to soybeaners.

1—In the future the soybean will increasingly find use as a broad spectrum food. Until population feeding problems become much more critical than they now are, the soybean will not likely supplant animal foods or animal protein in the human diet in the United States. Soybean protein on the other hand, may well find increased use as a protein additive in special food products and soybean milk may find special applications. Abroad, in the nations with more dense populations, soybeans are almost sure to increase in use as a food product for man.

2—The soybean even now supplies 20-25% of our visible edible fat supply. If it becomes conclusively shown that our high fat diet is a health hazard, the trend to eat less fat will have economic repercussions on the soybean oil market. The low fat soybean may be needed to offset this trend. Previous research has emphasized the high fat soybean.

3—Soybean oil as available can provide 60-70% of our dietary EFA, perhaps providing a bonus in good health, but in practice most of the EFA are destroyed by hydrogenation before the resulting product is consumed. The American Soybean Association should be deeply concerned with this problem and in the answer to the question, "Is commercial hydrogenation a human health factor?"

4—This Association should encourage research to provide an edible soybean oil. More soybean oil should be used by the American people as "soybean oil." The problem of producing edible soybean oil is still largely unsolved and indeed is a most difficult one. Further, a by-product of solving this problem will be to cut into the use of other edible oils. Manufacturers should be encouraged to explore the possibility of making margarines and shortenings with less hydrogenation, or as a compromise, by blending fully hydrogenated products with unchanged oil.

Soybean oil, consumed as such, can be one of our principal "fats of life." Let us work towards making this an objective.

Receipts at Mobile

A TOTAL of 7.3 million bushels of soybeans was received by the Public Grain Elevator at Mobile, Ala., in the fiscal year that closed Sept. 30, according to the firm's annual report.

Shipments of soybeans during the period totaled 7.4 million bushels.

Heaviest receipts and shipments were during the months of October, November and December.

Receipts included: 3,355 carlots, 227,785 bushels by barge, and 1,604,998 bushels by truck.

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AMERICAN SOYBEAN ASSOCIATION

Late News

Vol. 5, No. 25
Hudson, Iowa
Nov. 6, 1957

Published 32 times yearly as a service to the soybean industry.

HARVEST STILL LAGS

Rains were general over a large part of the soybean belt in late October to further delay an already late harvest. It appeared that a far larger bushelage was still in the fields as of the first of November than was generally realized—**perhaps up to 125 million bushels or over a fourth of the crop.**

A large acreage was still unharvested in northern areas west of the Mississippi River, and there was still some combining to be done in Indiana and Illinois. Harvest was about completed in Ohio. The crop was still largely to be combined in the South and the Eastern Seaboard states.

Latest Weather Bureau reports on the soybean acreage harvested: Ill. 94% (100% normal); Ind. 88%; Mo. 72%; Minn. and Iowa 65%; S. Dak. 35%. From other sources we had the following reports of acres harvested: Ala. 1.5%; Ark. 15-40%; Del. 5%; Kans. 50%; N. C. 0%; Ohio 99%; S. C. just getting under way; Tenn. 15%; Miss. 15%; Va. less than 10%; La. 15%.

So far there have been few reports of damage to the crop due to the delayed harvest and farmers seem unworried about the situation. Except in a few southern areas combining difficulties were at a minimum and **the full crop was being harvested.**

The quality was generally high but there have been some reports of high-moisture-content beans. Frost did catch scattered fields in central Indiana where the crop was planted late.

Mark H. Brown, New Providence, La., reports the early soybean crop in East Carroll Parish was a total loss due to rain. H. I. West, Bay Minette, Ala., says early beans were damaged in southwestern Alabama, and Townsends, Inc., Millsboro, Del., reports many damaged beans in that state.

Paul C. Hughes, Farmers Soybean Corp., Blytheville, Ark., calls the crop in his section the best in years for good quality beans, high yields and low foreign material.

LARGE PART OF CROP BEING STORED

From our on-the-spot reports it appears that **well over 300 million bushels of the 1957 crop may be going into farm and elevator storage**—though this is a rough estimate at best. States where storage may be heaviest are Illinois, Iowa, Minnesota, Missouri, Ohio and Indiana. Smaller amounts will be stored in Arkansas and Kentucky. Bulk of the crop will be stored in the Dakotas but the total is relatively small there.

Quoting J. E. Johnson, Champaign, Ill.: "Storage will be at all-time high. Far more on farms than is generally taken into account. More storage built, wheat and oats moved to make room and every available space utilized. Champaign County ASC reports over 200 loans on warehouse reciepts to date, over 50 on farm stored beans. **No one expects much selling regardlss of price upturn before the turn of the year."**

Walter W. McLaughlin, Citizens National Bank, Decatur, Ill., reports quite a few government loans coming through daily, with an estimated 25% of the crop being sold outright. More producers will take advantage of the loan than did last year, he believes.

Dixon Jordan, Standard Commission Co., Memphis, Tenn., says

ARTICLES APPEARING IN LATE NEWS ARE NOT TO BE REPRINTED WITHOUT THE PERMISSION OF THE AMERICAN SOYBEAN ASSOCIATION.

he expects **a heavy movement to the loan in the Midsouth.** Storage facilities there are better than ever before, making for more orderly marketing.

Our observers say only 5% to 10% of the crop is being sold in Ohio.

USDA ON MARKET OUTLOOK

U. S. Department of Agriculture officials think **as many as 100 million bushels of beans may go under price support this season,** with as much as 75 million bushels being delivered to CCC.

Tentative estimates of use in 1957-58 are: Crush 325 million bushels (316 million this past year); feed and seed 33 million; exports 90 million (85 million past year); carryover 49 million bushels.

"If prices at harvest are no more than moderately above support, holding soybeans for later sale would appear to be a reasonably good risk," says George Kromer, Agricultural Marketing Service fats and oils economist. "The support price would tend to set a floor under the market, at least through January 1958, with a good possibility of the usual seasonal rise.

"On the other hand, **any significant rise in bean prices in the months after harvest would seem to be a signal to sell,** unless the fats and oils situation changes greatly."

NO CHANGE IN MEAL SUPPLY

Total supplies of oilseed meals available for feed in 1957-58 are estimated at 10.1 million tons—about equal to the amount actually fed last year, according to the feed survey committee of American Feed Manufacturers Association in its annual report. The supply of soybean oil meal is based on an estimated crush of 330 million bushels of beans and continued large exports of beans and meal. The crush of cottonseed will be about 7% smaller than last year.

REPORTS ON EXPORTS

S. Hayashi, managing director of the Japanese-American Soybean Institute, quotes a report that the maximum quantity of new crop soybeans Japan may get from China will be 150,000 tons. Due to floods in Eastern China the quality is expected to be poor with moisture 16%-17%. Cost price will be about $73 or $74 per ton C & F Japan.

A total of 8.5 million bushels of soybeans is scheduled to load out of the Port of New Orleans in the Oct. 25-Nov. 15 period, report W. L. Richeson & Sons, Inc., Port export brokers.

	Cash prices Oct. 29
Soybeans, No. 1 yellow, Chicago, bu.	$ 2.25¼
Soybean oil meal, Decatur, ton	45.00
Soybean oil, crude, Decatur, lb.	.11⅜

	Cash price to Farmers for No. 1 soybeans Oct. 29	Price for No. 2 soybeans Oct. 29	Retail cash price for bagged soybean oil meal Oct. 29
Ala.		$2.10	$70
Ark.	$2.06		
Del.		2.10	61.50
Ill.	2.07@$2.08	2.06	55
Ind.	1.98		
Iowa	1.98	*1.93	74
Kans.	1.97	1.97	62@65
La.		2.00	
Minn.		1.96	
Mo.	2.10		
Ohio	2.06	2.04	68
Tenn.	2.05@2.10		60

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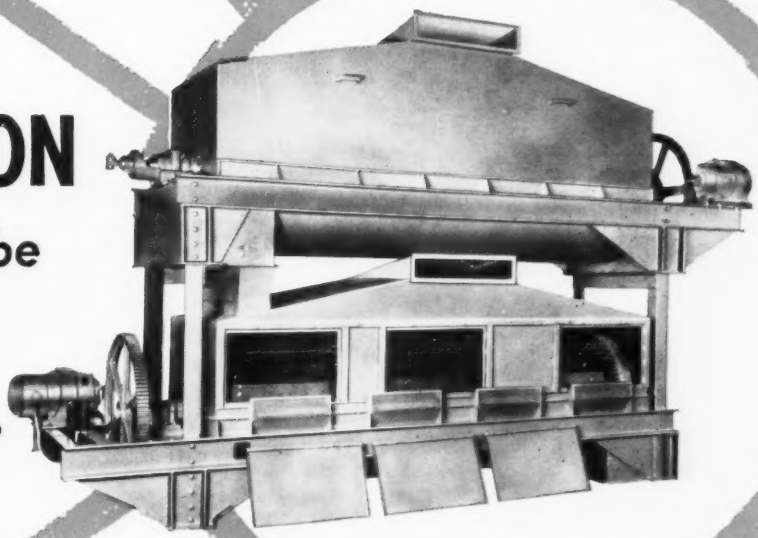

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American Trade Group to Japan

Return 1956 visit of Japanese team

AN AMERICAN soybean trade development team composed of representative U. S. soybean growers, handlers and exporters left this country Oct. 31 for a 3-week tour of the soybean industry in Japan. The team is returning the visit of a similar group from Japan to this country in 1956. The tour is sponsored jointly by the American Soybean Association and the U. S. Department of Agriculture.

Included in the American soybean team in Japan are:

John Sawyer, London, Ohio president of the American Soybean Association.

John W. Evans, Montevideo, Minn., and David G. Wing, Mechanicsburg, Ohio, past presidents of the Soybean Association.

Howard McWard, assistant general manager, Illinois Grain Corp., Chicago, Ill.

John N. Haymaker, in charge of coordinating company activities in soybean processing and merchandising for Cargill, Inc., Minneapolis, Minn.

James W. Martin, director of trade development for the Port of New Orleans.

The purpose of the trip is to observe first hand the problems of Japanese manufacturers in using U.S. soybeans in their food products. Since in Japan soybeans are primarily a food the problems of usage are quite different from those of the U. S. soybean industry.

The team will visit the Japanese-American Soybean Institute, the operating agency in Tokyo for the U. S. soybean market development project being sponsored in Japan by the American Soybean Association. They will meet representatives of all Japanese trade groups interested in the soybean business, and will visit Japanese food plants where U. S. soybeans are used in the manufacture of such foods as miso and tofu.

While in Japan the team will work with Shizuka Hayashi, managing director of the Japanese-American Soybean Institute, and William D. Termohlen, U. S. agricultural attache stationed at Tokyo.

Roach and Strayer Are in Europe

GEO. M. STRAYER, executive director of the Soybean Council of America, Inc., left Hudson, Iowa, Oct. 9 for Europe, where he was to spend a month in behalf of the U. S. export market development program for soybeans and soybean products. He was accompanied by Mrs. Strayer.

Strayer's immediate destination was London, but he was to join Howard L. Roach, president of the Council, and the two were to work in Italy, Spain and Austria, in behalf of export programs in those two countries.

President Roach was in charge of the U. S. exhibit of soybeans and soybean products at the Cologne, Germany, Fine Foods Fair (ANUGA), Sept. 28-Oct. 6.

Roach and Strayer attended the market development conference for agricultural attaches from U. S. embassies in Europe, the Near East and Africa held at the American Embassy in Rome Oct. 28-30.

The Council's general office for Europe was opened in Rome Oct. 15 with Fred R. Marti, general director, in charge. Miss Audrey M. Capes is Dr. Marti's assistant.

This followed the opening of the Council's office for Spain at Madrid in July. This office is in charge of Don Javier de Salas.

The Council is also opening an office for Italy in Rome in charge of Dominic Marcello. He will work under Mr. Marti.

Mr. Marcello, a United States native, has been connected with the American Embassy in Rome for a number of years. He has recently been in charge of trade fairs at Verona, Palermo and Bari for the U. S. Department of Agriculture and the U. S. Department of Commerce.

The Soybean Council's objective in its European program is to maintain and develop expanding markets for U. S. soybeans and soybean products in cooperation with Foreign Agricultural Service of the U. S. Department of Agriculture.

Funds from the project come from both FAS and the Council. FAS utilizes foreign currencies made available to it through the sale of U. S. surplus commodities which are sold abroad in exchange for foreign currencies.

On Surplus List

THE U. S. DEPARTMENT of Agriculture has announced that soybeans have been added and flaxseed deleted in the list of crops designated as surplus on lands leased from U.S. government agencies.

Any of the 12 designated crops produced in violation of leases will not be eligible for price support.

The Argentine Soybean Venture

By VOLOROUS H. HOUGEN
Fats and Oils Division, Foreign Agricultural Service
(reprinted from Foreign Agriculture)

WHEN I WAS in Argentina last summer, I saw evidence that soybeans may one day join sunflower, cottonseed, and flaxseed as an important oilseed crop in that country.

This is not the first effort Argentina has made to grow soybeans. But it is the first scientifically planned introduction of the crop. In recent years Japanese colonists in Misiones Province, who brought seed with them, have grown a few thousand tons for their own food; but this subtropical area does not have the best kind of soil and climate for soybeans.

Now, however, Argentine commercial interests have undertaken the introduction of soybeans on a large scale. They believe the crop may be more profitable than cotton, wheat, corn, and sunflower in certain marginal districts.

Area for Development

The area selected for immediate development — about the size of Kansas—includes all of Santa Fe Province and parts of adjacent provinces. It extends into important areas of wheat and corn production on the south and cotton on the northeast. Sunflower and flaxseed also grow here.

Production efforts for the 1956-57 crop centered in northwestern Santa Fe and southwestern Chaco Provinces. Last November, although 19,000 acres had been prepared for planting, the season was so dry that only about 3,600 acres actually were planted, and much of the 1,000 tons of seed specially imported from the United States remained unused. But the expected yield of 20 to 21 bushels per acre will provide pure seed for planting this fall, plus some beans for the market.

It was clear to me that careful planning has gone into this program. Argentine agronomists and soil scientists, trained in the United States, are analyzing soils and climatic conditions in cooperation with the Ministerio de Agricultura y Ganader'ia. Economic analyses are establishing the level of performance soybeans must reach if they are to displace other crops. And at government research centers and experiment stations, soybean varieties are receiving careful tests. In 1956-57, 74 varieties were on trial in different parts of the country. Those performing satisfactorily will receive a further test in field plantings. When they have proved their adaptability to local conditions, a production program will be undertaken with farmers.

Like the varieties, the farmers themseleves are carefully selected. Each gets not only a contract for the purchase of his crop, but seed, inoculants, fertilizers, and technical guidance. Five times during the 1956-57 crop year, each grower received instruction and practical demonstration, covering everything from preparing the seedbed, planting, cultivating, and controlling diseases and insects, to harvesting the crop. Successful producers are expected to help train others in future years.

The present objective is to produce 15 million bushels of soybeans. Technicians expect that by 1959 experience will permit the esablishment of production thoughout the corn areas and many of the wheat areas of Santa Fe Province. They claim that soybeans will partly replace not only these two crops, but cotton and sunflower also, in the production pattern of this area.

Past History

Soybeans have a long history of misfortune in Argentina, dating from around 1882. The end of the century saw good results from plantings in La Rioja Province; and in the early 1900's the C'ordoba Agricultural College reported successful trials. About this time experiments in using soybeans for fattening steers brought favorable results. In 1915, very large yields were reported in C'ordoba Province. Seed was increased, and in 1924 the Ministry of Agriculture distributed it to farmers, on the theory that drought resistance and value as an animal feed would make soybeans a useful crop. This program did not, however, succeed in establishing the crop on a sound footing in any area.

In the early 1930's a commercial organization imported 300 tons of soybean seed, and about 14,800 acres were planted. However, unsatisfactory yields led to low returns, which gave little incentive for continued production.

In 1941 the Instituto Argentino del Suelo encouraged a commercial firm to make further seed imports. This firm sold the seed and took an option to buy the crops. But again production failed to come up to expectations, apparently because growers did not know when to plant and how to grow the crop. In the year 1942-43, about 12,300 acres yielded only about 117,600 bushels of soybeans — 10.4 bushels per acre, compared with average U. S. yields of 20 bushels in 1951-55.

Push Safflower Crop

GENERAL MILLS, Minneapolis, and Pacific Vegetable Oil Corp., San Francisco, have announced that they will join in the development of the safflower seed crop in the Western Great Plains area.

In the announcement, S. D. Andrews, Jr., vice president and general manager of General Mills' soybean division, and B. T. Rocca, Jr., president of Pacific Vegetable Oil, said the two companies plan eventually to build a jointly owned plant at a site to be selected depending on the availability of sufficient acreage.

"Safflower," Andrews and Rocca said, "is now grown mainly in the Sacramento Valley of California, but it is a promising cash crop for farmers in many semi-arid regions.

Sees No Great Price Change

A UNIVERSITY of Illinois agricultural economist forecast that soybean prices would show no great changes during the coming year. T. A. Hieronymus believes the record supply means that price will be tied quite closely to the government loan. So prices can neither go down nor up very much.

Hieronymus points out that the October government crop estimate is 487 million bushels. Last year 456 million bushels were produced, but this figure may be revised downward. With an early harvest last year, the 1956 crop was used over a $12\frac{1}{2}$-month period. This year, with a late harvest, the crop needs to last only about $11\frac{1}{2}$ months.

After deducting for seed, waste and export, Hieronymus estimates that about 367 million bushels will be available for crush and carryover. If the market is to show any firmness at all this year, the carryover must be cut to 10 million bushels, leaving a crush of 357 million bushels. The crush this past year was about 315 million bushels.

In order to get this larger supply of soybeans crushed, the economist estimates that processors will need a crushing margin of about 22c. Adding this to the loan price of $2.18 in central Illinois and a 5c elevator margin gives $2.45 as the gross value of soybean products. This would be equal to $47 a ton for meal and $12\frac{1}{4}$c a pound for oil. These prices seem extremely unlikely this year if the entire soybean crop is to be used.

So it looks like a substantial carryover of soybeans next year. And this carryover will probably be owned by CCC. Farmers probably will put enough soybeans into loan to move the price up to the loan.

Under similar situations in the past, the season's price peak has occurred early in the marketing year. Any time prices move above the loan during the coming year, large selling by farmers is likely, Hieronymus concludes.

Futures Trading Poor Substitute for Storage

UNIVERSITY OF ILLINOIS grain marketing economists have pointed out that selling soybeans on the cash market and buying futures is a poor substitute for farm or warehouse storage.

As an example, the economists cite what happened last year in the soybean market. From Oct. 1, 1956, to Apr. 30, 1957, cash soybean prices rose from $\$2.13\frac{1}{2}$ to $\$2.26\frac{1}{2}$—a gain of 13c. During this same time, May futures dropped from $\$2.74\frac{1}{4}$ to $\$2.40\frac{3}{4}$, a drop of $6\frac{1}{2}$c. Farmers who stored from October to May were paid a little more than the cost of storage. Farmers who sold their beans and bought futures lost money on the move.

But right now farmers are asking what will happen this year? The economists point out that on Sept. 30, bids to farmers were $2.05 and May futures contracts closed at $\$2.34\frac{3}{4}$—a difference of about 30c. Next May the difference will likely be 13c to 14c. Cash soybeans will gain 16c to 17c on the May contract. Both may go up, both may go down or cash may go up and May futures may go down, but the difference will narrow.

So this year it looks as if those farmers who have storage space or can rent storage will be ahead to use it. Some who do not have storage or can't rent it have asked about selling their beans and buying futures.

The University of Illinois grain marketing staff looks at the situation this way: While cash soybean prices are below the loan, the distant futures prices are not. It looks as if enough soybeans will go under loan to force cash prices up to the loan by May or July next year.

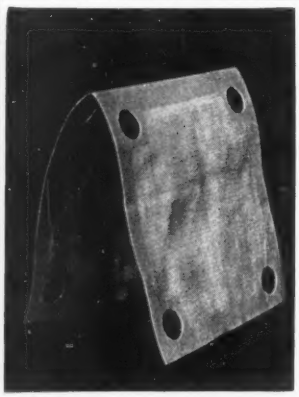
The grain marketing staff feels that the purchase of futures is not a good buy unless you think futures will go above the loan or fall below current prices.

Grant License to Use Autoglyceride Patent

LICENSE to use a public-service patent on preparation of certain chemically modified fats known as acetoglycerides has been granted by the U. S. Department of Agriculture to Beacon Chemical Industries, Inc., Cambridge, Mass., the Department reports.

The patent licensed to the Cambridge firm is U. S. No. 2,745,749, entitled "Glyceridic Mixtures Exhibiting Unique Properties, and Process for Their Production." It was issued to Agricultural Research Service scientists Reuben O. Feuge, Earl J. Vicknair, and Klare S. Markley for work done at USDA's Southern Utilization Research and Development Division in New Orleans, La., and assigned by them to the Secretary of Agriculture for public use.

Copies of the acetoglyceride patent may be obtained from the U. S. Patent Office, Washington, D. C., at 25c each. Reprints of technical papers dealing with acetoglycerides may be obtained free from the Southern Utilization Research and Development Division, USDA, P. O. Box 737, New Orleans 19, La.



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New Cargill Research Laboratory

CENTRAL research laboratory for Cargill, Inc., has been completed near the company's headquarters office at Lake Minnetonka, 12 miles west of Minneapolis. The new three-story building will serve all divisions of the company and will enable it to increase research investigations in industrial and edible vegetable oils and other fields where the firm is interested.

Crest a New Early Soybean Variety

CREST, an early maturing, high-oil-content Canadian soybean variety, has been approved for use in that country. Crest originated at the Central Experiment Farm at Ottawa.

Crest has an erect, bushy habit of growth with stems and leaves of medium size. It has good stalk strength and grows more rapidly than most varieties.

The variety matures 3 to 4 days earlier than Kabott and 4 to 7 days earlier than Flambeau. Seed is medium in size and seedcoat, hilum and cotyledon are all yellow.

Tests conducted at the Branch Experimental Farm at Morden, Manitoba, indicate that Crest is well adapted for production in southern Manitoba, where it has been found to have satisfactory maturity and yield, lodging resistance and high oil content. A good characteristic is its ability to carry the lowest pods higher off the ground than other varieties.

"Crest was licensed at the request of our Branch Experimental Farm at Morden," states F. Dimmock, Ottawa. "The need there is for an early maturing, good yielding, high oil variety of good plant type. In the drier seasons such early varieties as can be depended on to mature in southern Manitoba are short and the pods borne close to the ground, so that considerable loss is experienced in harvesting the crop. Under these conditions Crest has a little more height and carries the pods higher off the ground.

"Although I do not expect that Crest will find a place in eastern Canada, it has always shown one very desirable characteristic at Ottawa—the ability to grow more rapidly than most other varieties for about the first 3 to 4 weeks after emergence."

Add Three States to Nematode Quarantine

ON OCT. 10, Arkansas, Kentucky, and Mississippi were added to states quarantined by the U. S. Department of Agriculture because of the presence of the soybean cyst nematode, the Department announced.

Areas to be regulated in the three states will be limited to localities infested or likely to be infested with the pest. These comprise the Delta land between the Mississippi River levee and the adjoining state lines in Crittenden and Mississippi Counties, Ark., and De Soto County, Miss., plus an individual farm each in Mississippi County, Ark., and Fulton County, Ky.

Quarantine regulations provide that certain products and articles which might harbor the soybean cyst nematode may move from infested areas only under certification or permit issued by USDA. Most regulated products and articles are allowed movement after inspection or treatment, or under other conditions of handling or sanitary practices that make them safe for movement.

The regulations apply to interstate movement of live soybean cyst nematodes, soil, nursery stock and other plants with roots attached, root crops, bulbs, ear corn, soybeans, small grains, hay, straw, fodder, and plant litter of any kind, seed cotton, used farm tools and harvesting machinery, used construction and maintenance equipment, used sacks and other containers for farm products, and other machinery, vehicles and farm products that might spread the pest.

A new county, Camden, in North Carolina, has been reported infested with the nematode.

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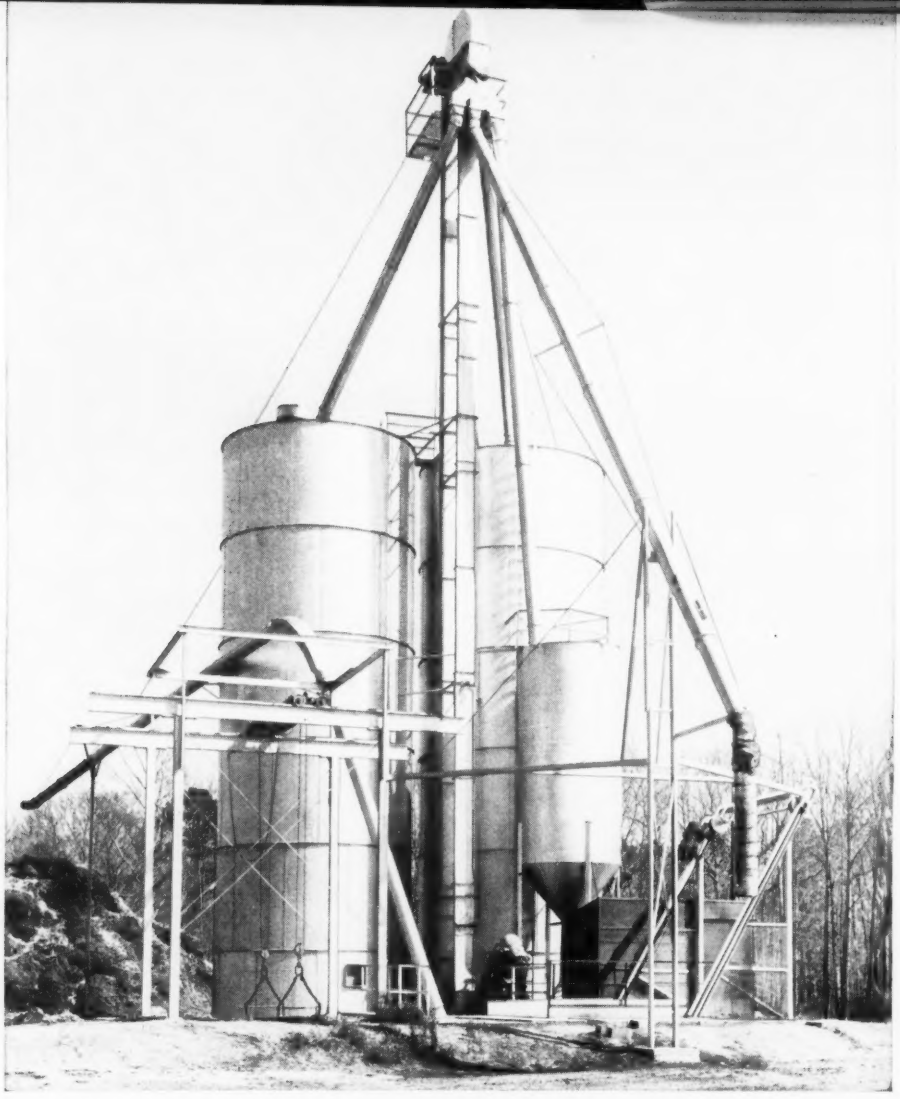

Here's a business-getter for a large city terminal. This country grain receiving depot enables the Davis Grain Company, Norfolk, Va., to secure grain in outlying competitive areas. Installation which uses Butler tanks was built by O. A. Newton & Son Company.

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Consumer Sales for Soya Lecithin Grow

FOR THE PAST 10 years Ralph A. Goldenberg, a food chemist, has been engaged in the soya lecithin field.

Earlier, he worked with eggs for the tanning industry, was assistant chief chemist in charge of the dairy and poultry laboratories of the U. S. Department of Agriculture in Chicago, and did experimental baking for the W. E. Long Co.

In 1947 he opened his own laboratory and formed Standard Research

Ralph A. Goldenberg

Products, Inc., where he developed the use of soya lecithin as an emulsifier in the baking of bread. These emulsifiers are used by commercial bakers for retaining freshness and softness without the use of chemicals.

Three years ago Mr. Goldenberg formed another company, National Lecithin, Inc., and started promoting refined soya lecithin in granular form and in tablets for the consumer, to be sold through leading drug stores, health food stores and department stores in the Midwest area.

As far as he knows, this was the first time anyone had attempted to promote refined soya lecithin through the media of radio, newspaper ads and television. Through his advertising campaign he says consumer sales have greatly expanded and the industry is fairly big and growing daily.

Refined soya lecithin has proven beneficial as an addition to the regular food intake, according to Mr. Goldenberg. He says it may prove helpful as an aid to people with symptoms of arthritis, rheumatism, coronary heart disease, arteriosclerosis and gallstones. Also, he says people have been helped with skin disease and diabetes.

As president of National Lecithin, Inc., and Standard Research Products, Inc., Mr. Goldenberg has his general offices at 2938 N. Halsted St., Chicago, Ill.

Greek Farmers Amazed By the U. S. Exhibits

THE AMERICAN agricultural exhibit at the International Trade Fair in Salonica, Greece, Sept. 1-22, was well attended, reports E. L. Stephenson, who represented the Soybean Council of America, Inc., as a feed nutritionist at the Fair. Dr. Stephenson is professor of animal nutrition at the University of Arkansas.

The exhibits portrayed feeds and feeding practices currently in use in America as contrasted with those used in Greece. The Greek farmers were amazed and would stand for some time comparing animals produced under the two conditions, says Dr. Stephenson. They were quite impressed with the efficiency of feed utilization that Americans expect to obtain. An exhibit of soybeans and soybean oil meal prepared by Dr. Stephenson received considerable attention.

The Greek farmers were also impressed with the exhibit showing mechanical milking of cows and chicks hatching in a glass incubator right before their eyes.

The feeding exhibits were actually somewhat conservative. Many animal and poultry producers in America are achieving better results than those portrayed by the exhibit. Since, however, the Greeks were impressed with the exhibit as presented it is somewhat doubtful that they would have accepted an exhibit portraying the optimum results that we are receiving in America today, according to Dr. Stephenson. For example, the exhibits in Greece showed a 3-pound broiler produced in 10 weeks with a feed conversion of 3 pounds of feed per pound of gain. This amazed the Greeks, yet a broiler produced in America could not exist unless its feed conversion was more efficient than this!

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CROP REPORT

1957 Crop Big, of Good Quality

SOYBEAN harvest was late in most areas and a substantial part of the crop remained to be harvested in the northern part of the belt in late October. This was particularly true west of the Mississippi River.

Except for early varieties, most of the crop was still to be combined in the South.

The U. S. Department of Agriculture raised its soybean crop estimate on Oct. 1 to 486,373,000 bushels, up almost 60 million bushels from its Aug. 1 estimate.

In general, quality of the crop was reported good—exceptional in many areas. But there was trouble with high moisture in some spots, and some reports of excessive foreign material.

Early reports indicate that oil content will be at least equal to last year.

Our reports are that farmers are storing a major portion of the crop and that country offerings have been light in many areas considering the size of the crop.

Reports from our correspondents:

Illinois. Walter W. McLaughlin, Citizens National Bank, Decatur: Crop 99% harvested. Per acre yield 10% lower than 1956. Some lodging with Harosoy. Estimated 25% being sold outright. More than last year going under government's support program. Quite a few loans coming through daily.

W. V. Simmons, Quincy Soybean Products Co., Quincy (10-19): Total yield between 10 and 15% more than 1956. Oil content 18.5% to 19%. Test weight 54.5; moisture average 12.6%; foreign material average 2%. About 40% of crop being sold outright. Growers will take full advantage of government's support program.

John H. Butterfield, Pana (10-22): Less than 1 inch of rain in 70 days. Late beans hurt by drought. Last half of crop harvested when very dry. Much cracking. 60% of crop being sold outright. 10% going under support program now. Rest will depend on price action before January. Long harvest. Easiest crop to handle in 10 years.

Indiana. Chester B. Biddle, Remington (10-22): Some 30 miles from here some late fields still out. Total yield up a little from 1956. Quality very good. Maybe 10% of crop being sold outright.

J. B. Edmondson, Danville (10-23): I've been singing the soybean blues ever since the floods stopped in July until harvest time, then the yields broke all records on our farms. So I'm cured! Even though I can't account from all my past experience for what happened in the soybean fields this summer. This is the general experience here. Orderly marketing of the huge soybean crop seems to be developing. Quality high, size of seed unusually large, which accounts in part for the surprising high yields. Weed seed too common. No damage except frost in latest fields, which are a small comparative acreage. Around 40-45% being sold outright. Seems to be little interest in government program. Generally, beans are stored on the basis of a rising market later in 1957 or in 1958.

Iowa. Glenn Pogeler, north Iowa Cooperative Processing Association, Mason City (10-21): 70% combined. Too much moisture. Five good days of combining would clean up the beans. Total yield up 12% to 20%. Federal Oct. 1 crop report low by 2 bushels per acre. Quality much better than last year and about the same foreign material. Oil content slightly better, test weight 56.5, moisture 12%, f. m. 2.5% to 3%. Twenty percent of crop being sold outright, 50% to 60% will go under the loan.

Kentucky. David Frymire, Ohio Valley Soybean Cooperative, Henderson: We anticipate a drawn-out harvest with substantial acres of very late beans. Our guess is yield down 2 to 3 bushels per acre but acres up to make yield about like 1956 and just a little more. So far tests show oil content around 20.3%.

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SOYBEANS FOF BEANS

October 1957 Crops Reporting Board, AMS, USDA

	Yield per acre			Production		
	Average 1946-55	1956	Indicated 1957	Average 1946-55	1956	Indicated 1957
	Bushels			1000 Bushels		
N. Y.	16.2	14.0	17.0	99	112	102
N. J.	19.0	24.0	15.0	432	1,080	705
Pa.	17.4	18.5	14.0	400	388	308
Ohio	21.4	24.0	22.0	21,793	31,224	30,888
Ind.	21.8	24.0	23.0	36,334	52,128	53,935
Ill.	23.0	28.5	25.5	85,530	134,948	130,458
Mich.	19.4	21.0	21.5	1,987	4,200	5,117
Wis.	14.0	15.5	16.0	605	1,318	1,664
Minn.	18.2	20.0	21.0	22,682	52,540	56,049
Iowa	22.0	20.0	26.0	38,190	50,900	70,408
Mo.	18.0	20.0	20.5	23,005	39,120	36,080
N. Dak.	12.6	12.5	16.5	404	2,162	2,986
S. Dak.	14.8	11.5	16.5	1,232	2,576	3,069
Nebr.	20.3	11.5	28.0	1,456	1,748	4,060
Kans.	11.7	8.5	12.5	3,959	3,018	3,688
Del.	15.6	23.0	18.5	1,067	3,450	3,164
Md.	16.8	22.0	19.5	1,487	4,422	4,017
Va.	17.0	21.5	19.5	2,525	5,826	5,382
N. C.	15.6	21.5	19.5	4,286	8,944	8,756
S. C.	11.2	11.0	14.5	987	2,948	4,930
Ga.	10.1	12.5	13.0	305	1,038	1,248
Fla. [1]	18.4	22.0	20.0	[1] 290	748	840
Ky.	17.2	22.5	20.0	2,051	2,992	2,740
Tenn.	17.8	16.5	20.0	3,092	3,960	4,000
Ala.	18.8	21.0	18.0	1,310	2,310	2,088
Miss.	15.6	16.0	21.0	4,988	11,712	14,301
Ark.	17.0	18.0	21.0	10,083	27,162	32,445
La.	16.2	17.0	20.0	779	2,295	2,440
Okla.	10.5	8.0	15.0	395	200	345
Texas [1]	13.2	20.0	18.0	8	400	360
U. S.	20.2	21.8	22.5	271,689	455,869	486,573

[1] Short-time average.

Late varieties will cut this some. Test weight 54-55; moisture 11%; f. m. 3.1%. Beans are average to good. Little damage. Actual dirt from dry fields is only deterring factor. 25% of crop being sold outright. Indications are that farmers will wait and see with regard to the government's support program.

Louisiana. W. M. Scott, Jr., Scott Plantations, Tallulah (10-21): Continued wet weather ruined chances of excellent yields and high quality. Our Dorman yield 25 bushels of what looked to be 35- to 38-bushel crop. Lee crop looks good but are low so some loss to be expected. Outlook for completion of harvest Nov. 20.

Minnesota. Eldred Buer, Canby (10-20): I believe on the average throughout the county there are more good fields than usual with smaller weed problem in spite of the excessive moisture this year. The county's average will probably not be as high as last year, for the north half of the county sustained considerable loss from hail and severe windstorms. On the whole I would say yields for the county are very good. One hears of a few fields hitting 40 bushels per acre. I think from 20 bushels to the low 30's will catch the bulk of the crop.

John R. Thompson, University of Minnesota agronomist, Waseca (10-22): This year's soybean crop is the best in both yield and total volume that south central Minnesota has ever had. Many reports of beans yielding 30 to 40 bushels per acre. Quality excellent.

Missouri. A. O. Tischer, Callao (10-22): Average yields lower than 1956. Quality of Clark beans, early plantings very good. Others poor to medium. Clark our best variety this year with many reported yields 45 bushels or better. Our own case of 80 acres Clark on silt loam following 100 bushel corn did slightly better than 52 bushels, in 28-inch rows. Harosoy 29 bushels. At least 40% of growers will seal beans.

Carver Brown, Laddonia (10-22): Yields about same as 1956. Quality generally good. 50% being sold outright. Very little use of support program.

Mississippi. D. Gray Miley, Panther Burn Plantation (10-19): Total yields one-third more than 1956. None harvested to date. Quality will be good if weather is good during November. Slight damage from woolly bear caterpillar. All will be sold at harvest. Only small amount of storage available.

North Carolina. George E. Spain, agronomy extension specialist, North

The Electronic Yard: where freight trains get off to a fast start

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As a result, the railroads' earnings are reduced – and the nation loses some of the benefits of railroad progress. In your interest – in the interest of *every* American family – railroads should be given equal opportunity to earn an adequate return on their investment. *Isn't this common sense?*

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Carolina State College, Raleigh (10-22): Outlook for completion of harvest Dec. 1. No combining troubles anticipated except for localized and scattered weed problems. Yields almost comparable with 1956. Insect damage evident. Summer drought affected yield per acre. No significant part of crop will be stored because of lack of farm storage.

North Dakota. Floyd Poyzer, manager, Amenia Seed & Grain Co., Amenia (10-22): 60% of crop harvested. Very wet fields. Yields same as 1956. Going to have considerable damage. 80% will go under government support program.

Tennessee. Dixon Jordan, Standard Commission Co., Memphis (10-21): About 5% of crop in Midsouth harvested. Will be completed end of November or later depending on weather. Many weedy fields need a killing frost. Last year the peak movement in this area occurred between Oct. 12 and 18. This year we do not expect the movement to reach a peak before week of Nov. 11. Quality looks better than average on all factors but it's still early. Southern portion of our area has considerable damage due to excessive moisture. There will be temporary market gluts but the facilities are better than ever making for more orderly movement.

Ontario. Gilles DePutter, Appin (10-22): 90% of crop harvested. Very favorable year for harvesting. No weeds to speak of. Quality excellent. Very little damage of any kind. 25% of crop being sold outright, remainder divided about equally between farm and elevator storage. Storage filled to capacity.

'57 World Crop Another Record

WORLD PRODUCTION of soybeans in 1957 is forecast by the Foreign Agricultural Service at 883 million bushels. This represents a record outturn for the fourth successive year, exceeding production in 1956 by 3% and the 1950-54 average by almost one-third.

The estimated 29 million-bushel increase from 1956 is due almost entirely to the further increase in U. S. production, as China's crop is believed to be down somewhat. The United States and China produce over 90% of the world's soybeans and export nearly all of the beans and oil that move in world trade.

Canada's production, currently estimated at a record 6.1 million bushels, is 15% above last year's outturn. The bulk of the crop is grown in Ontario, but this year some 4,000 acres were planted in Manitoba (3,000 acres in 1956), where an average yield of 10 bushels per acre is reported.

Soybean output in **China-Manchuria** is believed to be down from 1956—possibly to the 1955 level—when an estimated 335 million bushels were produced. Acreage reportedly declined from 1956. Moreover, there have been reports of adverse spring weather and of summer floods in some important soybean areas.

In **Japan** production this year is expected to be up slightly from 1956, when unfavorable weather adversely affected the crop. Reliable data have not been reported as yet regarding 1957 soybean crops in other producing areas of Asia.

Yugoslavia's soybean crop is forecast at almost three times the small output of last year. Production in **Eastern Europe** also is believed to be up this year.

Soybean production in **Brazil** increased an estimated 10% in 1957. Soybeans have been an important export crop in Brazil in recent years, with Japan the principal market. While soybeans have been a minor crop in **Argentina**, about 100,000 bushels were produced this year. And, as a result of extensive experimental work, further expansion in the near future is foreseen.

Soybean production in Africa is of relatively small importance. **Nigeria** is the major producer, but small quantities also are grown in the **Belgian Congo, British East Africa** and the **Union of South Africa.** The bulk of the Nigerian crop is purchased by the Nigerian Marketing Boards for export. Purchases from the 1957 crop are expected to approximate the 594,000 bushels purchased from last year's harvest.

SOYBEANS: ACREAGE, YIELD PER ACRE, AND PRODUCTION IN SPECIFIED COUNTRIES AND THE WORLD, AVERAGES 1935-39 AND 1950-54, ANNUAL 1955-57[1]

Continent and country	Acreage[2]					Yield per acre					Production				
	Average					Average					Average				
	1935-39	1950-54	1955	1956	1957[3]	1935-39	1950-54	1955	1956	1957[3]	1935-39	1950-54	1955	1956	1957[3]
	1,000 acres					Bushels					1,000 bushels				
North America:															
Canada	[4] 10	188	214	243	256	[4] 21.3	22.0	26.4	21.8	23.8	[4] 207	4,074	5,650	5,301	6,088
United States [5]	3,042	14,747	18,620	20,926	21,650	18.5	20.3	20.1	21.8	22.5	56,167	298,422	373,522	455,869	486,573
Europe:															
Italy	[6]	2	1	1	—	[4] 12.1	22.1	22.1	22.5	—	[4] 1	34	14	15	—
Yugoslavia	5	12	7	7	15	14.9	7.3	18.0	12.6	17.8	71	90	123	92	265
Other Europe	95	130	145	150	155	—	—	—	—	—	1,065	745	905	750	920
U. S. S. R. (Europe and Asia)	[7] 607	815	667	791	—	—	—	—	—	—	[7] 5,805	—	—	—	—
Asia:															
Turkey	[7] 1	8	12	15	7	29.0	12.9	12.3	12.6	12.4	[7] 37	104	147	184	92
China	12,411					16.7					207,666	[8]330,175	[8]335,000	[8]340,000	[8]335,000
Manchuria	8,992		28,273	—	—	16.8	—	11.8	—	—	151,294				
Indonesia	[9] 889	1,081	1,273	1,210	—	[9] 10.0	10.3	9.9	10.4	—	[9] 9,731	11,155	12,722	12,559	—
Japan	797	1,040	953	947	900	15.6	15.7	19.6	17.7	19.4	12,338	16,521	18,632	16,735	17,453
Korea [10]	[4] 1,921	625	664	666	—	10.0	7.8	8.2	8.5	—	17,654	4,835	5,464	5,631	—
Taiwan	[4] 17	62	85	89	—	[4] 8.9	9.2	10.4	11.6	—	[4] 151	576	887	1,032	—
Thailand	[4] 15	53	53	53	—	—	[4] 15.4	13.1	13.9	14.2	[4] 232	700	739	761	—
South America:															
Argentina	—	2	1	1	6	—	13.7	14.8	14.9	16.1	—	30	18	19	99
Brazil	—	[4] 157	198	197	210	—	[4] 22.1	19.9	22.2	22.7	—	[4] 3,471	3,927	4,364	4,777
Africa:															
Belgian Congo (including Ruanda-Urundi	—	9	—	—	—	—	7.4	—	—	—	—	69	196	147	184
Nigeria [11]	—	—	—	—	—	—	—	—	—	—	—	254	372	594	600
Union of South Africa	—	[4] 12	—	—	—	—	6.6	—	—	—	—	76	47	50	—
Total excluding "Other Europe," U.S.S.R., Chinese Mainland and North Korea	5,670	18,080	22,195	24,500	25,300	—	—	—	—	—	87,185	341,050	423,115	504,195	537,710
World total [12]	29,000	45,160	51,980	55,140	55,445	—	—	—	—	—	463,720	681,770	767,955	854,610	883,295

[1] Years shown refer to years of harvest. Southern Hemisphere crops which are harvested in the early part of the year are combined with those of the Northern Hemisphere harvested the latter part of the same year. [2] Figures refer to harvested areas as far as possible. [3] Preliminary. [4] Average of less than 5 years. [5] Acreage harvested for beans. [6] Less than 500 acres. [7] One year only. [8] Unofficial estimate. [9] Java and Madura only. [10] Beginning with 1950 figures represent South Korea only. [11] Purchases for export. Local consumption is small. [12] Includes estimates for the above countries for which data are not available and for minor producing countries. Foreign Agricultural Service. Prepared or estimated on the basis of official statistics of foreign governments, other foreign source material, reports of U. S. Agricultural Attaches and other U. S. representatives abroad, results of office research, or other information. Prewar estimates for countries having changed boundaries have been adjusted to conform to present boundaries, except as noted.

"Who, me? Tomorrow's hope?"

We'll admit that's a pretty lofty title, young lady. But what we mean is that you and the thousands of other farm girls are mighty important to this country's future.

Whereas your farm background will serve you well in whatever lot you pursue, let's look at your future on the farm.

From our point of view, it looks like a mighty good future. There are lots of reasons why.

You see, with the population growing so fast, cities starting to burst at their seams—people will be needing more and more things from the farm. And that puts farm folks in a key position.

Why do we feel you're so important? You'll be tomorrow's farm homemaker. You'll have the job of providing your home with warmth and love and happiness. We couldn't very well do without you.

How will *living* on the farm be? Ask your mother how much things have improved on the farm just since you were a baby. Then look at all the progress that's already been made in making a housewife's life on the farm more pleasant. Why, right now you can have all the conveniences that any housewife has—even those living in the largest cities. And in years to come, living should be even more comfortable.

The way this world's population is booming, before the turn of the century there'll be 136 people to feed and clothe for every 100 today. That's a whale of an increase. And it means a tremendous challenge to the ability and skill of our farm families.

But as we said earlier, young lady, without you and your influence, the future in farming wouldn't be nearly so bright.

Did we say you're "tomorrow's hope?"

We sure did. And we think the title fits you like a crown.

Wear it proudly.

* * * * * *

Yes, we at Cargill are convinced that this pretty young lady *is* tomorrow's hope, and we're all counting heavily on her.

We've seen a lot of farm girls grow up during our 93 years as Creative Processors of farm products, and we know the fine kind of women they are.

We know, too, that today's farm girl will fulfill her destiny in the same quiet, magnificent way her mother has . . . with the stamina of a pioneer, the devotion of a saint, and a precious gift of love and understanding that defies description.

Yes, tomorrow looks bright for this young princess and her crown.

And largely *because* of her, we at Cargill feel our future is bright, too. Through Creative Processing, our aim is to change an ever-increasing number of raw farm crops into finished products people will need and buy.

Cargill
CREATIVE PROCESSING

93 Years of
Creative Processing
of Farm Products

CARGILL

Miso Maker Switches to U. S. Beans

By SHIZUKA HAYASHI
Managing Director, Japanese-American Soybean Institute, Tokyo, Japan

EVIDENTLY STIMULATED by the various educational and promotional projects of this Institute, quite a number of similar activities in the campaign for more consumption of soybean foods are being carried out by different groups including more under the sponsorship of different prefectural governments. Publicity for more consumption of soybean products has become quite popular.

The writer attended a week-long soybean promotional program in September in the city of Sendai, which has a population of about 400,000. Various exhibits of soybean products like miso, shoyu, tofu, soybean salad and cooking oil, natto, kinako, etc., were displayed together with actual cooking demonstrations of these products. Several panels showing nutritional values of soybeans and soybean products which were used by the Institute during the recent Tokyo fair were sent over to this exhibit.

Many housewives and others were gathered in front of the different booths and the cooking demonstations.

The Institute participated on that occasion in the name of the Food Life Improvement Association backed by the Ministry of Agriculture and the Miyagi Prefectural Government by giving a lecture on the nutritious values of soybeans and soybean products. The speaker was J. Sasaki, vice president of the All Japan Miso Association.

U. S. Beans Exclusively

The biggest miso maker in this district and one of the largest in Japan—he also manufactures shoyu—has been using U. S. soybeans only since the early part of this season.

The reasons given by the president, Mr. Sasaki, for preferring U. S. soybeans are:

1—The quality of domestic soybeans varies; even beans of the same variety differ in quality according to the areas produced.

2—Domestic soybeans, especially those produced in the northern Honshu areas, contain purple colored beans that not only give a darker color to miso but also contaminate other perfect beans during storage.

3—The price is generally higher than U. S. beans, and beside the quantities available from any specified variety are small.

As far as the size of beans is concerned preference is given to the domestic soybeans because of their larger and more uniform size.

Education Needed

The first of a series of classes for dealers was held in Kyoto Oct. 4 and 5 in the name of the Japan Nutrition Association (Welfare Ministry). William D. Termohlen and Mr. Crawford, agricultural attaches in Tokyo and Manila respectively, attended with staff members of this Institute.

Very educational and interesting lectures were given, one on the importance of soybeans as a food source by Professor Nakamura of Utsunomiya University, and another on the status of Japanese nutrition by Professor Nishio of Kyoto University.

In spite of the fact that the quality of U. S. soybeans has been steadily improving since the activities were initiated by this Institute, a number of those present, especially those representing the miso and tofu groups, complained about foreign material and the irregular size of U. S. soybeans.

To these complaints emphatic and persuasive explanations were given that the quality of U. S. soybeans, especially foreign material content, has been greatly improved. The fact was substantiated by figures showing analysis of all shipments arriving in Japan during 1956 and 1957, which show an average of foreign material below 2%.

Impressions of Japanese consumers such as were manifested in this meeting certainly require time and patience to be corrected. The duty of this Institute is to carry on education and demonstrations repeatedly until correct and better impressions are implanted in the minds of all consumers using U. S. soybeans.

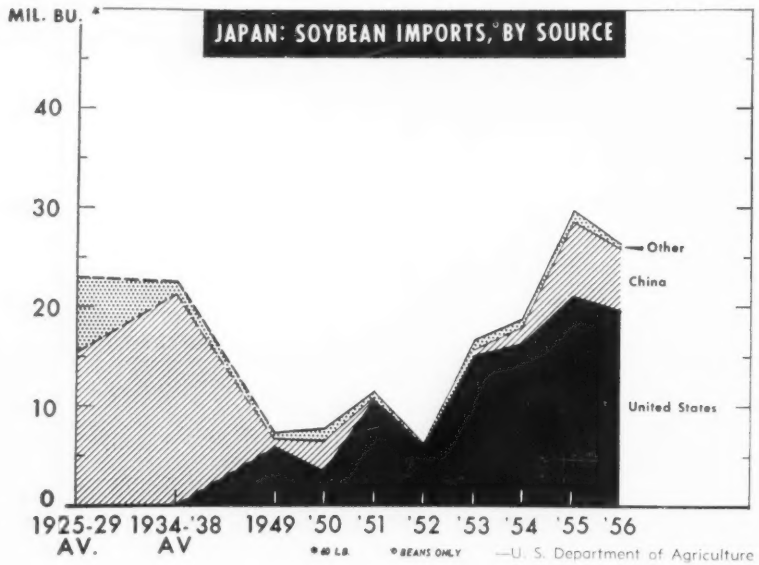
Very frequently it is claimed that the taste and flavor of products made from U. S. soybeans are not as good as those manufactured from domestic or Chinese soybeans. These points require further research. It is hoped that the survey of Dr. A. K. Smith of the U. S. Department of Agriculture which will be carried out on his arrival in Japan will help to solve these technical problems.

Chinese Soybeans

The production of new crop Chinese soybeans is expected to be around 10 million tons, with a surplus for export of about 1 million tons, according to a business man who recently returned from a trip to Red China.

He reports that about 600,000 to 700,000 tons will go to Russia. The maximum quantity Japan may get from China, he expects, is about 150,000 tons.

Due to floods in northeastern China the quality is expected to be bad, with moisture from 16% to 17%. The cost is approximately $73 or $74 per ton C & F Japan.



NECESSITY of soy proteins to feed meat animals is discussed by Howard L. Roach, president of the Soybean Council of America (left) with Dr. Joseph Wienken.

SOYBREAD is shown to German housewife, at Anuga Fair, by Miss Ursala Cauer, bilinguist assistant to Council President Howard L. Roach.

COLOGNE FAIR WAS MOST SUCCESSFUL

THE U. S. DEPARTMENT of Agriculture reports that the exhibit of U. S. farm products at the Cologne, Germany, "Fine Foods Fair" broadened and strengthened contacts between German buyers and American exporters of U. S. farm products.

The Cologne Fair, held Sept. 28 to Oct. 6, attracted more than half a million persons. Significance of the promotion is indicated by the fact that Germany, in fiscal year 1957, was the third largest world customer for American farm products.

In addition to serving as a showcase for displaying U. S. agricultural products to German consumers, the exhibit was an effective meeting place for German and American businessmen. At the U. S. pavilion, informal luncheons and conferences helped to pave the way for expanding the German market for American farm commodities. Means of easing import restrictions and meeting other trade barrier problems were discussed, and business contacts established.

The market-promotion exhibit was one of the most successful of the 20 overseas displays presented in the Department's International Trade Fair program in the past 2 years. As with other exhibits, the Cologne display was a joint endeavor of the Department and cooperating U. S. private trade groups.

The Trade Fair program is part of the Department's foreign market development activities financed with foreign currencies acquired through sales of surplus commodities.

Commodities displayed were citrus, deciduous, canned and dried fruits; poultry and poultry products; lard and meat products; wheat and wheat products; honey; fresh frozen and fresh prepared foods; tobacco; and soybeans and soybean products.

Visitors expressed keen interest in American methods of cooking, packaging, and marketing. Many ate American doughnuts, some fried in soybean oil, some in lard; tasted soy bread, spread with lard in the old German custom; and bought thousands of pieces of cooked American poultry.

German official interest in the exhibit was evident. Dr. Heinrich Luebke, German Minister of Food, Agriculture and Forestry twice visited the U. S. pavilion and asked many questions about American farm products.

Private trade groups cooperating with the Department in the exhibit included the Soybean Council of America, Inc.

Howard L. Roach, Plainfield, Iowa, president of the Council, was in charge of the U. S. exhibit of soybeans and soybean products.

The U. S. display showed German fair visitors what the soybean is, what is derived from it, and how these derivatives are used in edible products. It included a display of beans; salad oil in cans and bottles; meal and protein made from soybeans, and a display of end products including soybread, sardines and tuna packed in soybean oil, margarine, shortening, salad oil, sausage extenders, candy bars, soy sauce, crackers and canned products.

Building Solvent Plant in Carolina

THE NEWLY FORMED Selma Soybean Corp., Selma, N. C., will build a solvent extraction processing plant to be ready for operation in the 1958 season, Floyd C. Price, Jr., president, has announced. A 100-ton Anderson unit will be installed. The plant will also be adaptable for the processing of cottonseed, peanuts and other oil-bearing seeds.

Other officers of the corporation are A. L. Perry, first vice president; A. Z. Thompson, second vice president, and R. G. Gurley, secretary-treasurer and plant manager.

The plant will be located on a 9-acre site on East Preston St. extension, adjacent to the Gurley Milling Co. property. It will operate 24 hours daily and is scheduled to go into operation in September or October 1958. It will require approximately 15 employees.

This will be the first solvent extraction plant in North Carolina.

NEW PRODUCTS and SERVICES

CLEANER. A new, high-efficiency grain cleaner has been announced by Dunbar Kapple, Inc., manufacturers of the Vac-U-Vator pneumatic grain conveying machine. The cleaner effectively removes cut kernels, dirt, dust, pellets and other foreign material from all types of grain during conveying operations.

The 98HD cleaner is recommended for use with the Vac-U-Vator when filling flat storage, track-loading and filling bins. It has also been used successfully to clean up dirty grain before shipment.

The new cleaner is being offered only to present users and new purchasers of Vac-U-Vators.

For further information write Soybean Digest 11a. Hudson, Iowa.

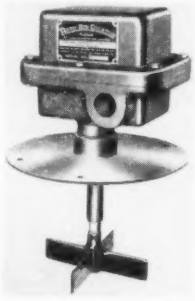
FLAKING ROLLS. Hydraulic positioning for flaking rolls is a proven hydraulic system for applying, measuring and controlling flaking pressure offered by Albert Lea Engineering Co.

It improves extraction and uniformity of flakes by precision pressure control and extreme ease of adjustments. Eliminates wear and tear on rolls and mill caused by rolls running together without feed. When feed stops, pressure can be released manually by touching a lever, or automatically with a solonoid valve.

For detailed information, write Soybean Digest 11e, Hudson, Iowa.

LEVEL CONTROL. The Bin-Dicator Co. has announced important engineering changes in the Roto-Bin-Dicator, bulk material level control device.

The improvements were made to permit the use of this equipment where severe, or rugged operating conditions may exist, such as vibration and high stresses on the paddle and shaft assembly.



The Roto-Bin-Dicator has a slowly rotating paddle, mounted on a flexible shaft. This projects into the bin and is driven by a small motor mounted in a housing outside the bin.

Installation is simple, requiring only a hole in the bin wall to admit the paddle, attachment of a steel plate with six screws and connection to a power source.

The improved Roto-Bin-Dicator is equipped with a redesigned low torque motor and gear reduction unit, as well as an improved mounting arrangement.

For a copy of Bulletin 8C giving details on the improved Roto-Bin-Dicator, write Soybean Digest 11c, Hudson, Iowa.

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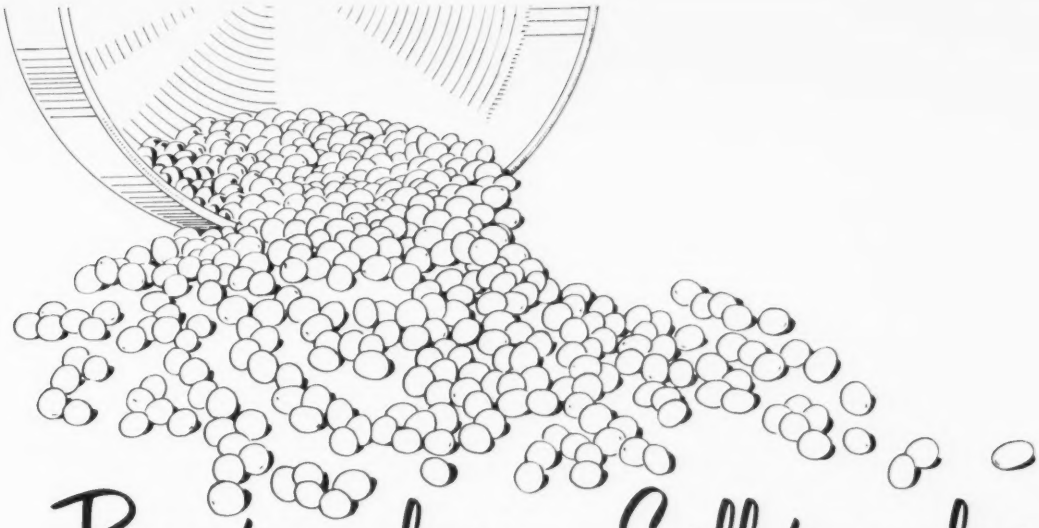

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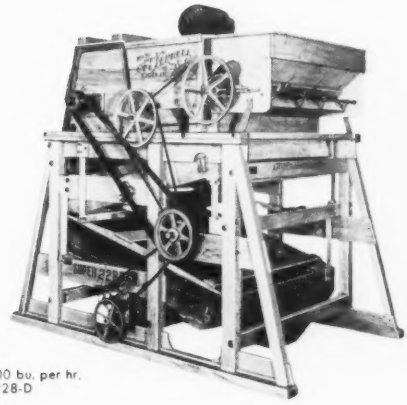
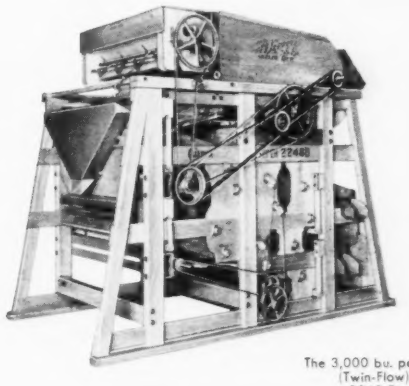
either of two *Clippers* will make you more profits



The 1200 bu. per hr.
228-D



The 3,000 bu. per hr.
(Twin-Flow)
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LATE REPORTS

PROCESSING OPERATIONS. Reported by the Bureau of the Census for August and September.

Primary products at crude oil mill locations: Production, shipments and transfers, and stock, September 1957-August 1957

(All figures in short tons of 2,000 pounds except those for linters which are in running bales)

Products	Production		Shipments and transfers		Stocks end of month	
	Sep-tember 1957	Au-gust 1957	Sep-tember 1957	Au-gust 1957	Sept. 30, 1957	Aug. 31, 1957
Soybean:						
Cake and meal	517,491	604,175	556,389	639,534	54,729	93,627
Flour	8,938	10,728	8,950	11,105	1,607	1,619
Lecithin	1,255	1,353	(NA)	(NA)	1,494	1,620

NA—Not available.

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, September 1957-August 1957

(Tons of 2,000 pounds)

	Net receipts at mills		Crushed or used		Stocks at mills	
	Sep-tember 1957	Au-gust 1957	Sep-tember 1957	Au-gust 1957	Sept. 30, 1957	Aug. 31, 1957
U. S.	475,122	585,291	667,362	761,601	191,107	383,347
Illinois	220,181	234,754	256,605	286,096	75,171	111,595
Indiana	51,552	93,640	83,231	86,822	16,316	47,995
Iowa	65,612	96,432	112,553	132,331	28,806	75,747
Kansas	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky	(1)	(1)	(1)	20,110	(1)	(1)
Minnesota	27,452	38,473	45,238	56,303	6,384	24,170
Missouri	21,148	(1)	32,753	26,925	16,488	28,093
Nebraska	(1)	(1)	(1)	(1)	(1)	(1)
North Carolina	(1)	(1)	(1)	(1)	(1)	(1)
Ohio	26,598	31,682	47,330	60,717	10,817	31,549
Texas	(1)	(1)	.....	(1)	(1)	.....
All other	62,579	90,310	89,652	92,297	37,125	64,198

[1] Included in "All other" to avoid disclosure of figures for individual companies.

Soybean products: Production and stocks at oil mill locations, by states, September 1957-August 1957

	Crude oil (thousands of pounds)				Cake and meal (tons)			
	Production		Stocks		Production		Stocks	
	Sep-tember 1957	Au-gust 1957	Sept. 30, 1957	Aug. 31, 1957	Sep-tember 1957	Au-gust 1957	Sept. 30, 1957	Aug. 31, 1957
U. S.	244,415	276,614	106,577	102,702	517,491	604,175	54,729	93,627
Ill.	96,132	105,711	41,127	35,592	190,964	220,745	15,667	41,069
Ind.	30,262	31,744	17,977	11,033	66,116	70,312	8,335	5,278
Iowa	41,286	48,048	15,244	16,961	92,877	109,413	6,928	15,135
Kansas	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Ky.	(1)	7,395	1,068	1,047	(1)	15,877	1,575	(1)
Minn.	16,194	18,158	16,316	18,459	32,965	42,670	2,690	2,911
Missouri	12,302	9,757	2,299	1,152	27,248	22,162	3,433	1,978
Nebr.	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
N. C.	(1)	(1)	(1)	(1)	(1)	(1)	564	643
Ohio	16,921	21,954	5,228	5,720	38,523	49,667	4,479	3,974
Texas	.....	(1)	.....	(1)	.....	(1)	(1)	(1)
All other	31,318	33,847	7,318	12,738	68,798	73,329	11,058	22,639

[1] Included in "All other" to avoid disclosure of figures for individual companies.

STOCKS. Soybean carryover stocks in all storage positions on Oct. 1, are estimated at 9.9 million bushels, by Agricultural Marketing Service. This compares with only 3.7 million bushels on hand a year ago and is more than double the Oct. 1 average.

From an estimated supply of 459.6 million bushels (carryover Oct. 1, 1956 of 3.7 million plus 1956 preliminary production of 455.9 million bushels) a disappearance of about 450 million bushels is indicated for the crop year by the Oct. 1 stocks.

Actual disappearance for the period includes about 316 million bushels processed for oil, around 85 million bushels exported, and seed, feed, losses, etc.; of about 33 million bushels. In addition, processings and exports during September 1956 of perhaps 12 million bushels from the 1956 crop should also be included. This indicates a difference of only about 1%, thus no major revision in the 1956 crop production appears likely.

Due to the late crop and generally ample supplies, relatively few 1957 crop soybeans were processed in September 1957.

Stocks of soybeans, Oct. 1, 1957 with comparisons

(in thousand bushels)

	Oct. 1 Av. 1946-55	Oct. 1 1956	July 1 1957	Oct. 1 1957
On Farms [1]	2,464	1,995	36,805	3,657
Terminals [2]	746	369	5,583	3,539
Commodity Credit Corp. [3]	166	0	74	0
Processing Plants [5]	834	291	18,724	1,493
Int. Mills, Elev. & Whses. [1 4]	555	1,076	26,109	1,241
TOTAL	4,763	3,731	87,295	9,930

[1] Estimates of the Crop Reporting Board. [2] Commercial stocks reported by Grain Division, AMS, at 45 Terminal cities. [3] Owned by CCC and stored in bins or other storages owned or controlled by CCC; other CCC-owned grain is included in the estimates by positions. [4] All off-farm storages not otherwise designated, including merchant mills. [5] Firms reporting crushings and stocks of soybeans to the Bureau of the Census.

	Off-farm total [1] October 1		Total [2] all positions October 1	
	1956 1,000 bushels	1957 1,000 bushels	1956 1,000 bushels	1957 1,000 bushels
Ohio	.....	166	.....	322
Indiana	58	396	277	1,178
Illinois	284	2,088	782	2,763
Minnesota	302	397	522	1,185
Iowa	325	970	687	1,275
Missouri	69	90	169	286
Kansas	10	.....	27	.....
North Carolina	12	176	37	310
Unallocated and others*	676	1,990	1,230	2,611
U. S.	1,736	6,273	3,731	9,930

* Other States and unallocated—to avoid disclosing individual operations. [1] Includes stocks at Interior Mills, Elevators and Warehouses, commercial stocks reported by Grain Division, AMS at terminals, and those owned by Commodity Credit Corporation which are in bins and other storages under CCC control. [2] Off-farm total plus farm stocks.

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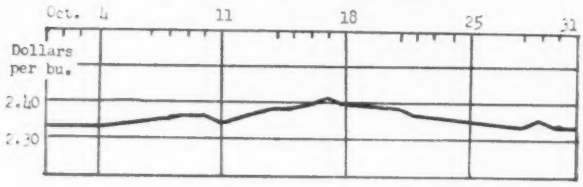
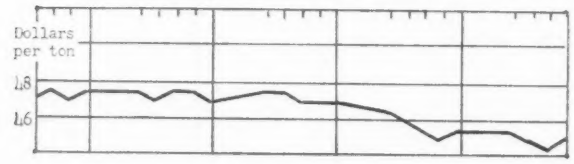
DAILY MARKET PRICES

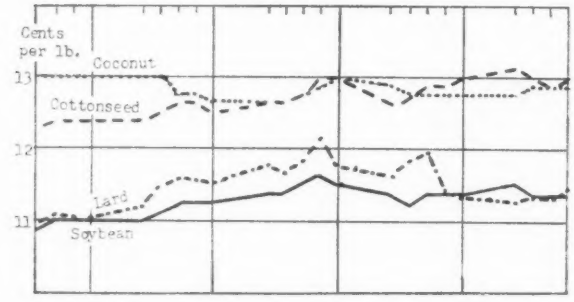
No. 1 Cash Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur

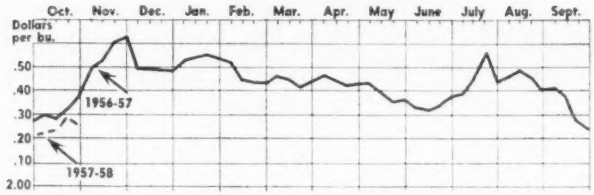


Crude Vegetable Oils and Lard

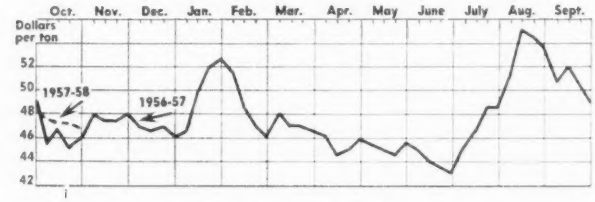


TRENDS AT A GLANCE (Weekly Close)

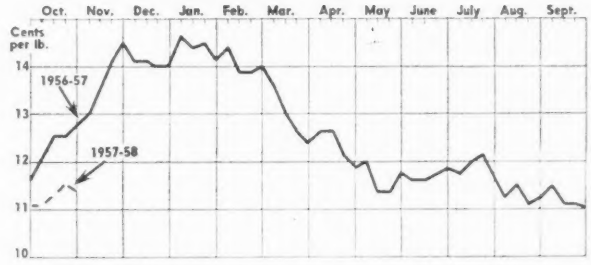
No. 1 Cash Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur



Crude Soybean Oil, Tankcars



October Markets

SOYBEANS made a slight gain in October and soybean oil advanced ½¢ despite the government's Oct. 1 forecast of a record breaking 1957 crop. Meal lost $3 during the month.

The USDA report raising its estimate on the 1957 soybean crop another 28.3 million bushels to an alltime high of almost 490 million bushels was of most importance for the long run, if the report is borne out by later estimates.

With an apparent supply for the year of almost 500 million bushels, it appeared that another big export program will be needed to avoid a burdensome carryover into the next crop year.

Important offsetting factors that tended to strengthen the markets were:

1—Heavy storage on the part of farmers with a fairly light country movement to market during October.

2—Rains that delayed soybean and cotton harvests and made for poorer quality crops, especially cotton.

The fact that there was a low carryover of 1956—crop soybeans—less than 10 million bushels—and low stocks of edible oils and fats, also helped to bolster the market.

Also helping to strengthen the markets were:

1—The government's report that the cotton crop is smaller than expected.

2—Reports that a sizable government export program is in the making, and that announcements of forthcoming exports under P. L. 480 will be out soon and will include Turkey, Italy and Spain.

A bearish factor was reports that processors have been able to obtain sufficient supplies for needs in early months.

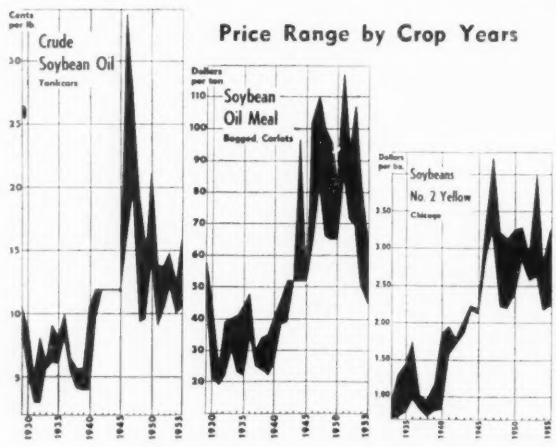
Weakness in the meal market was a reflection of plentiful offerings and slow demand.

BYPRODUCTS. The price of soybean fatty acids declined from 15¾¢ per pound to 15¼¢ during October. Acid soybean soap stock delivered Midwest declined from 6⅛¢ to 6¢ per pound, and raw soybean soap stock remained at 2⅝¢ per pound.

1956 AND 1957 SOYBEAN CROPS

	1956-57	1955-56
Soybeans crushed Oct. 1-Sept. 30.....	315,940,000 bu.	282,126,000 bu.
	1957-58	**1956-57**
Total soybeans inspected for overseas shipment including lake shipments to Canada Oct. 1-25	7,787,651 bu.	9,053,152 bu.

Price Range by Crop Years



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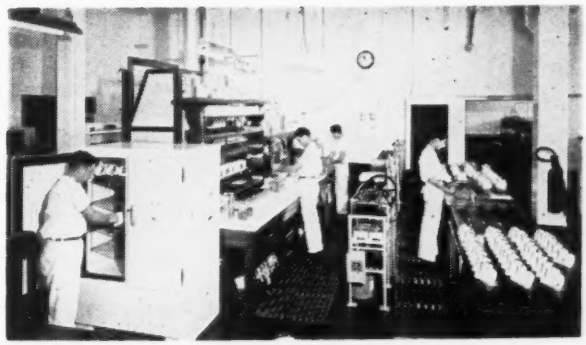
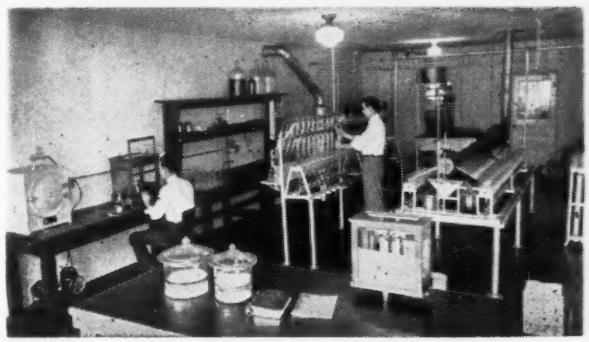
* Wilson, Arkansas
* Cairo, Illinois
* Blytheville, Arkansas
* Clarksdale, Mississippi





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Official Chemists for National Soybean Processors Association

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GRITS and FLAKES . . . *from the World of Soy*

R. J. Brown Changes

T. M. Scherer E. L. Metcalf

R. J. Brown, president, **R. J. Brown Co.,** and affiliate of Ashland Oil and Refining Co., announces the following changes in the executive personnel of the firm.

Effective Oct. 1 Mr. Brown became chairman of the executive committee of the Brown firm. T. M. Scherer, executive vice president, advanced to the newly created post of chairman of the board. E. L. Metcalf, vice president, became president of the company.

Mr. Scherer has been associated with the R. J. Brown Co. for many years and is widely known throughout the industry. Mr. Metcalf joined the firm in 1945 following wide experience in the coatings and plastics industries.

Executive offices of the R. J. Brown Co. are at 1418 Wittenberg Avenue, St. Louis, Mo.

UI Agronomy Prof

Henry Hadley, a native of Livingston County, has been appointed associate professor of agronomy at the University of Illinois.

M. B. Russell, head of the agronomy department, made the announcement. At Illinois Hadley will be spending the major part of his time in soybean genetics and breeding work.

Hadley attended Illinois State Normal University for 2 years and then transferred to the University of Illinois, where he received his B.S. degree. He received his M.S. from Texas A. & M. College and his Ph.D from Illinois in 1951.

Since 1946 he has been teaching genetics and doing research with sorghums at Texas A. & M.

At Illinois Hadley will fill the post that has been vacant since C. M. Woodworth retired last year.

Hears Overseas Firm

In a joint statement by John T. Brown, president, and Marc B. Rojtman, executive vice president, it has just been announced that Herbert H. Bloom, formerly president of Massey-Harris-Ferguson, Inc. in the United States, has been elected president of **J. I. Case International, S. A.,** a newly organized wholly owned subsidiary of the parent company.

Herbert H. Bloom

Bloom's appointment as head of J. I. Case International constitutes a strong move on the part of the Case Co. toward worldwide operations and the establishment of overseas manufacturing plants in Europe, South America and elsewhere.

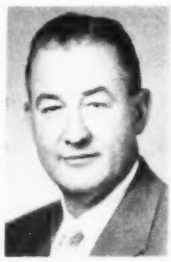
Bloom's experience in this field stems from his background with Massey-Harris-Ferguson whose combined global operations are one of the most extensive in the farm equipment industry.

In his new position with Case International, in addition to directing overseas operations, Bloom will also supervise Case's further expansion in Canada.

ADM Appointment

Appointment of Richard K. Davies as manager of soybean purchasing for **Archer-Daniels-Midland Co.,** Minneapolis, was announced by A. C. Hoehne, vice president and manager of ADM's soybean division.

In this position, Davies will direct all of the company's soybean buying, formerly the responsibility of the late Forrest E. Benson, ADM vice president who died Sept. 10.



Richard K. Davies

Davies joined ADM's soybean accounting department in 1930 and he was in charge of that section until 1945, when he became assistant soybean buyer. Davies is a member of the crop improvement council of the National Soybean Processors Association and of the Minneapolis Grain Exchange and serves on the Exchange's coarse grain grades committee.

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Striking Label

High-style treatment has resulted in a strikingly modern new foil label for Kalo Legume Inoculants produced by **Kalo Inoculator Co.**

Kalo's new foil label features a leaf design in gleaming metallic colors of green, gold and white on an orange background.

The tri-color petal and a reduced size logotype are repeated on the back of the can for fast brand indentification.

An unusual construction feature: A layer of free aluminum foil with sealed laps lines the inside of the specially made cans. This safeguards the activity of the nitrogen-fixing bacteria by sealing in moisture and keeping a relatively constant atmosphere.

Oil Sales Manager

APPOINTMENT of Delmar F. Rentshler as refined oil sales manager of the **A. E. Staley Manufacturing Co.** has been announced by E. L. Rhodes, manager of the Decatur, Ill., concern's soybean division.

The appointment was effective Nov. 1.

Rentshler will head Staley's refined oil sales organization with branch office distribution points at Philadelphia, New York, Cleveland, Chicago and San Francisco, and broker representatives in other areas throughout the country.

D. F. Rentshler

Rentshler joined Staley's as a research chemist in 1946. He succeeds Harold Lents, who became assistant sales manager in the crude oil department.

The grain merchandising office formerly operated at Des Moines by **Cargill, Inc.**, has been moved to Fort Dodge, Iowa, the company has announced. H. Robert Diercks, vice president in charge of Cargill's grain division, said the change was made to consolidate office facilities with the company's vegetable oil division, located at 5 Central Ave., Fort Dodge.

Arnold W. Klemme, assistant director of the Missouri Agricultural Experiment Station, has been selected as group leader of University of Missouri personnel carrying out a 2-year contract with the government of India. The University will furnish agricultural institutions in India technical help with their teaching, research and extension programs.

D. James Dowd has been appointed district manager for the **Day Sales Co.** and has opened offices at 6305 Brookside Plaza, Kansas City 13, Mo. The firm distributes dust control and bulk material handling equipment manufactured by the Day Co. of Minneapolis.

Shanzer Manufacturing Co. has just announced the completion of a new model 30 drier installation for Spencer Kellogg & Sons, Inc., in Bellevue, Ohio. The new unit will handle up to 450 bushels per hour and will be employed primarily for soybean drying.

John R. Hale, manager of the **Chase Bag Co.** branch in Minneapolis since 1937, has been appointed Midwestern regional sales director for the firm. Included in the Midwestern region are the Minneapolis, Kansas City, St. Louis, Chicago and Milwaukee offices of the firm. Mr. Hale will make his headquarters in Minneapolis.

Plans have been announced by **Central Soya Co., Inc.**, and its feed division, McMillen Feed Mills, Fort Wayne, Ind., for the construction of a modern Master Mix feed plant at Des Moines, Iowa. The new operation is being planned for a rated capacity of 200 tons of feed in an 8-hour day, and will be the first production unit of this kind to be erected by the company.

Appointment of Dr. George N. Cornell as director of a newly created operations research department at the **A. E. Staley Manufacturing Co.**, Decatur, Ill., has been announced. The new group will apply techniques of scientific evaluation and mathematical analysis in a systematic study of existing company operations, and develop useful data to management in directing affairs of the company.

Inland Forwarding, Inc., announces the opening of a branch office at 308 Board of Trade Building Annex, New Orleans 12, La., under the management of Merlin A. Paddock.

NOW RUN YOUR GRAIN MOISTURES the IMPROVED more ACCURATE way!

with the NEW SEEDBURO Steinlite model 500 RC MOISTURE TESTER

25 YEARS OF RESEARCH HAVE MADE THESE FEATURES POSSIBLE

1. NEW ROUND FUNNEL – handles larger (250 gram) sample – especially designed for whole grains—automatic funnel reset
2. EASY-TO-READ, built-in, eye-level thermometer
3. LARGE 9 INCH METER gives automatic reading . . . no button to push, or dials to adjust. One scale for all moisture ranges
4. NEW EASE OF OPERATION AND SPEED—balance tester and thereafter all that is necessary is to drop sample into test cell and obtain automatic meter reading at that time

Tests are equivalent to the basic standards of the U.S.D.A.

You'll have to put New Seedburo Steinlite 500 RC through its paces to find how easy and conveniently this improved model makes moisture tests on corn, wheat, oats, rice, soybeans, flax, rye and sorghums. You simply drop the larger more practical 250 gram sample into the test cell and read the meter. Full information and the famous Seedburo service is as near to you as your phone . . . Call ANdover 3-2128 Collect, or—

"See your Seedburo Representative"

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(SEED TRADE REPORTING BUREAU)
EQUIPMENT COMPANY
Dept. SD11, 618 W. Jackson Blvd., Chicago 6, Ill.

WASHINGTON DIGEST

Plan Good Volume of Export Shipments

By PORTER M. HEDGE
Washington Correspondent for The Soybean Digest

ENOUGH MONEY and energy is being put behind the fats and oils export program this year that a respectable volume of shipments is in prospect during the coming marketing season even if the total doesn't equal the peak of the year just closed.

Export agreements under the Public Law 480 program for the new season were scheduled to begin coming from the Department of Agriculture early in November.

There was no official indication of what the 480 program total might come to. However, it was estimated that the amount would run at least as high as the approximately 560 million pounds shipped via this program last season. This amounted to over two-fifths of total edible oils shipments estimated at about 1,285 million pounds.

The emphasis is to be on edible oil shipments under the 480 program; in other words, on the price-supported crops soybeans and cottonseed.

The policy does not rule out lard or other animal fat shipments. If countries prefer them—and some of them will—arrangements can be worked out, a top official said.

P. L. 480 agreements are to be firmed up as rapidly as possible. The plan is to get specific sales nailed down for delivery within specified periods, so long waits and deferral of shipments can be avoided. This, at least, is a goal.

It's generally agreed that fats and oils shipments this season won't be quite as large as the big total of last year. However, officials are not making apologies for current prospects.

The agreement with Spain again will be one of the big ones under the 480 program. Close to 100,000 metric tons are expected in a first allocation to Spain, with the possibility of another 100,000 metric tons later.

A program has been under way looking to the time when Spain could stockpile United States' vegetable oils to be blended with olive oil as a means of stabilizing supply.

The Spanish olive crop is estimated tentatively at around 350,000 to 375,000 metric tons—not a big year. It is difficult to obtain a good estimate of the crop this early, however.

Normally Spain is a deficit oil producing country. If a stock-pile of olive oil could be built up to be used as a blend with imported oils, a more stable supply could be assured.

Whether Spain will be in a position to stockpile olive oil this year for later blending is not indicated officially. Some officials, off the record, doubt it.

Yugoslavia will be a bigger customer of the U. S. for fats and oils in the coming season than last year—if relations between the two countries do not deteriorate.

Italy has a big olive oil crop and has some holdover oil not yet taken from last season's allocations. Though Italy is not likely to be in our market this year, she is not ruled out entirely.

Turkey is reported to be wanting a good-sized quantity of our cottonseed oil. She will be a much bigger customer this season than last, officials indicate.

Soybeans Surplus Crop

For the first time soybeans are considered a surplus crop, in so far as price support operations are concerned.

USDA has added soybeans to the list of crops designated as surplus on lands leased from government agencies. No crops obtaining price support, and designated as surplus, can be grown on lands under Federal lease.

Because of the large supply of soybeans, soybean oil will be the chief beneficiary under the 480 program this season.

Is there a chance that soybeans will be put on the P. L. 480 list? There has been some talk of this in Washington. It is not likely that soybeans would be put on the list now, but this shouldn't be ruled out if Commodity Credit Corp. takes over a large volume of beans next summer.

The tentative estimate is that CCC might have to take as many as 30 to 40 million bushels.

Another plan advanced by the crushers is for USDA to have an oil buying program to take care of any surplus. Oil so purchased could be used in foreign relief programs. So far there is no official enthusiasm for the plan.

Price Outlook

USDA has this to say concerning the outlook for soybean and soybean oil prices:

"Soybean farm prices during most of the 1957 harvesting season prob-

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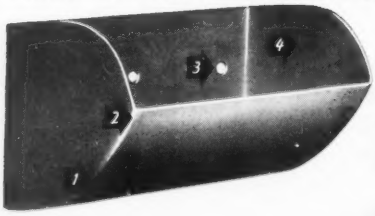

Your jobber has them, or write B. I. Weller Company, 327 South LaSalle Street, Chicago 4, Illinois.

(1) The logarithmic curve design loads easier . . . dumps cleaner . . . permits high speeds.
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CALUMET CUPS

ably will average near the national support level of the $2.09 per bushel. The size of foreign crops . . . for which reliable estimates will not be available until late 1957 or early 1958 are likely to have considerable influence on U. S. soybean prices later in the season.

"Soybean oil prices during the heavy October-December 1957 marketing period are likely to average somewhat lower than a year earlier. Some factors that helped to strengthen prices a year earlier are not operating this year. In the fall of the 1956 season when supplies were tight, demand increased because of a backlog of unfilled P. L. 480 orders and the blockage of the Suez Canal.

"On the other hand, there will be some factors that will tend to strengthen the early season demand for soybean oil, though probably not as much as a year earlier.

"In October-December domestic users may have to replenish stocks reduced earlier. Purchases for export under P. L. 480 may be substantial. Furthermore, supplies of competitive cottonseed oil are expected to be somewhat smaller, making bean oil prices relatively more attractive for use in end products."

Research Study

A 2-year research study pointed at determining what the factors are which cause management to use one oil or fat in preference to another has been launched by the Department of Agriculture under the Research-Marketing program.

The study will be conducted by the Washington University School of Business and Public Administration in St. Louis, Mo., for USDA. It is a 2-year project for which approximately $24,000 have been allocated. It is one of many recommended by USDA's oilseeds and peanut advisory committee.

Object of the study is to find out what happens in the movement of oils from the first processing to end user, and in particular what causes a firm to choose between the major edible oils and between oils and animal fats when one oil or one fat would be as good as another.

Among the factors to be investigated are: The influence of price support on use of fats and oils, as well as influence of price, transportation distances and charges, exports, etc.

Why inequities have been built up in storage of fats and oils. At what prices does an interchange between fats and oils take place. Why does cottonseed oil or soybean oil, for example, go into margarine during a certain period as against animal fats and at what prices.

Trends in the level of consumption also will be studied. The work is to be under direction of William Emory, professor of marketing at the University.

Former ASA Board Member Passes

HENRY I. COHN, a leading soybean producer and operator of large-scale farming projects in three states, died of pneumonia and complications at a Palm Beach, Fla., hospital Sept. 29. He was 63. Burial was at St. Louis, Mo.

Mr. Cohn was a member of the board of directors of the American Soybean Association in 1949-52 and very active in the affairs of the Association during that period.

H. I. Cohn

He was best known to soybean people for his development and operation of the 10,000-acre Valley Farms (the former Fairbanks Ranch) on the Illinois River and the 3,000-acre Cypress Land Farms in southeastern Missouri. Between 3,000 to 3,500 acres of soybeans have been grown annually on the two farms.

Since 1951 he had been interested in the huge 65,000-acre Indian Trail Ranch at Palm Beach, Fla.

- MARKET STREET -

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here. Rate 10c per word per issue. Minimum insertion $2.00.

FOR SALE: TWO MODEL 46 Sprout Waldron Simplex Pellet mills. Good condition. 50 HP and 60 HP, 25 cycle motors available. Coop. G.L.F. Exchange, Inc., P. O. Box 973, Buffalo 5, N. Y.

FOR SALE—NEW OR USED 80600E or 806000H sewing machine heads, Whizzer conveyors, bagging scales and bins. Write Winborn, Williamsburg, Iowa.

USED MOISTURE TESTERS. WE have all types of used electric moisture testers at reasonable prices. Send for free catalog on grain testing and handling equipment. Burrows Equipment Co., 1316-D Sherman Ave., Evanston, Ill.

FOR YOUR STORAGE PROBLEMS —steel grain bins still available, some 18 ft. x 16 ft. 3,300 bu. bins, and 21 ft. x 16 ft. 4,400 bu. bins at attractive prices. Also smaller farm sizes for resale. For particulars, write Midwest Steel Products Co., 121B Railway Exchange Bldg., Kansas City 6, Mo.

FOR SALE — ANDERSON AND French expellers, cookers, driers, 5-high 48-inch crushing rolls, 36-inch attrition mills, sewing machines, hammermills, cracking rolls, filter presses. Ray L. Jones, 2222 Oakview Drive, Jefferson City, Mo.

USED VAC-U-VATORS—REBUILT and factory-guaranteed. Contact Dunbar-Kapple, Inc., Vac-U-Vator Div., Box 361, Batavia, Ill. Phone Batavia 5-400.

WANTED: FLAKING AND CRACKing rolls, meal coolers and driers and rollermills. Soybean Digest, Box 319-J, Hudson, Iowa.

FOR SALE—USED AND FACTORY rebuilt Steinlites. Reasonable. Phone Wheaton 8-7474 or write Douglas L. Mains Co., Box 509, Wheaton, Ill.

FOR SALE—SEEDBURO STEINlite grain moisture tester, factory rebuilt, one year guarantee. Exclusive distributors Seedburo Equipment Co., 618 W. Jackson Blvd., Chicago 6, Ill.

FOR SALE — ONE (COMPLETELY reconditioned) Allis single stand flaking mill; 25 hp motor (new) and drive, 15-in. x 30-in. rolls, babbit bearings, $2,500 fob Chicago. One (completely reconditioned) Allis double stand roller mill; 9-in. x 24-in. rolls and complete with motor and V-belt drive; price includes one extra set of four rolls, all eight rolls ground and corrugated to your specifications, $2,500 f.o.b. Chicago. Soybean Digest, Box 319-M, Hudson, Iowa.

WANTED: EXPERIENCED OPERator, superintendent, for solvent soybean processing plant. Contact R. G. Gurley, Selma Soybean Corp., Selma, N. C.

WANTED—TWO HULLERS WITH shakers, Bauer or similar. Advise make, model, size, condition, price. Also 36 ft. bucket elevator. Soybean Digest, Box 319-S, Hudson, Iowa.

IN THE MARKETS

FACTORY USE VEGETABLE OILS for July and August 1957. Reported by Bureau of the Census (1,000 lbs.)

Factory production and consumption, and factory and warehouse stocks, August 1957-July 1957

	Factory production		Factory consumption		Factory and warehouse stocks	
	August 1957	July 1957	August 1957	July 1957	Aug. 31, 1957	July 31, 1957
Cottonseed, crude	48,393	42,577	46,525	58,474	36,787	48,915
Cottonseed, refined	43,777	54,947	103,764	101,717	98,945	153,522
Soybean, crude	276,614	*268,757	255,008	223,006	199,167	*217,629
Soybean, refined	241,083	211,177	222,759	202,512	113,725	98,925
Hydrogenated vegetable oils—						
Edible:						
Cottonseed	28,410	28,549	26,827	27,522	14,966	15,013
Soybean	106,514	102,617	98,490	94,432	40,663	40,942
Other	7,252	6,513	4,932	4,697	3,060	3,403
Inedible	(2)	518	1,598	1,233	1,976	1,757
Margarine [1]	116,812	109,977	(NA)	(NA)	28,453	25,444

* Revised. NA—Not available. [1] Data for stocks exclude quantities held by consuming factories. [2] Not shown to avoid disclosure of figures for individual companies.

Factory consumption of vegetable oils, by uses, during August 1957

	Edible products				Inedible products		
	Shortening	Margarine	Other edible	Soap	Paint and varnish	Lubricants and similar oils [1]	Other inedible [2]
Cottonseed, crude					(3)		
Cottonseed, refined	11,843	1,088	1,937	(3)	(3)	(3)	185
Soybean, crude				30	323	(3)	1,943
Soybean, refined	46,926	7,988	3,825	(3)	6,227	20	7,019
Foots, vegetable, raw and acidulated (100% basis)				2,607	(3)	(3)	1,548
Hydrogenated vegetable oils, edible:							
Cottonseed	10,489	13,960					
Soybean	30,545	65,747	2,186				
Other	1,784	(3)	1,280				

[1] Includes quantities consumed in lubricants, greases, cutting oils, dielectric oils, core oils, brake fluids, and metal working. [2] Quantities consumed in linoleum and animal feeds are included in the above totals. Data for fats and oils consumed in chemicals and linoleum and oilcloth, which were previously shown separately, are now included in "Other inedible" while quantities consumed in core oils, cutting oils, brake fluids, dielectric oils and metal working, formerly included in this total are now classified in "Lubricants and other oils." [3] Not shown to avoid disclosure of figures for individual companies.

Consumption of fats and oils in fat splitting (1,000 lbs.)

	1957			1956	
	August	July	Jan.-August Cumulative	August	Jan.-August Cumulative
Soapstocks					
Vegetable foots	9,965	6,591	62,911	9,895	70,132

U. S. Census Bureau

Soybean crushings in Canada, crop years 1946-47 to 1956-57

	Quantity crushed bu.	Oil produced lb.	Oil meal produced tons
1946-47	2,277,304	22,723,208	52,596
1947-48	2,300,743	24,472,042	54,343
1948-49	3,901,831	39,663,914	89,002
1949-50	4,958,799	50,473,816	116,845
1950-51	7,393,274	72,676,381	176,343
1951-52	7,059,102	70,325,206	169,762
1952-53	8,406,128	87,925,833	200,725
1953-54	8,837,753	93,389,955	213,169
1954-55	10,211,458	105,117,779	241,465
1955-56	11,799,336	124,170,765	279,095
1956-57 [1]	13,445,526	141,822,239	322,848

[1] Preliminary. From Dominion Bureau of Statistics, Ottawa.

EXPORTS. Preliminary data on U. S. exports of soybeans and soybean oil for August 1957, with comparative data for August 1956 and cumulative totals through August for the marketing years 1955-56 and 1956-57, reported by Foreign Agricultural Service, U. S. Department of Agriculture.

	Unit	August 1956	August 1957	October-August 1955-56	October-August 1956-57
Soybeans	bu.	1,708,626	7,833,349	64,603,598	80,852,088
Soybean oil:					
Crude	lb.	9,413,290	13,663,788	66,127,289	368,108,553
Refined but not further processed	lb.	6,110,341	5,150,136	58,379,377	84,481,481
Refined, deodorized and hydrogenated	lb.	54,014,799	1,638,247	356,174,986	325,554,374
Total beans and oil, oil equivalent basis	lb.	88,299,143	106,462,343	1,190,029,158	1,665,900,334

Total grain vessel clearance of soybeans from the Port of New Orleans in September was 3,368,000 bushels compared with 1,506,000 bushels for September 1956, according to the New Orleans Board of Trade.

Soybeans: Inspections for overseas export by coastal areas and country of destination, September 1957 (1,000 bu.)

	Soybeans		Soybeans
Atlantic		Trieste	0
Holland	30	Peru	0
United Kingdom	0	Belgium	192
Belgium	0	United Kingdom	89
Ireland	0	Japan	178
Scotland	0	Denmark	345
West Germany	0	Korea	115
Trieste	0	Formosa	83
Norway	136	Israel	370
Austria	0	Other	2
Italy	0	Subtotal	3,199
Japan	20	**Lake Ports**	
Subtotal	186	Canada	307
Gulf		Grand total	3,692
Holland	1,520	Total January-September 1957	48,671
Mexico	0	Total January-September 1956	32,200
West Germany	305		
Sweden	0		

Data are based on weekly reports of inspections by licensed grain inspectors for overseas export and do not include rail or truck movement to Canada or Mexico. In some cases the ultimate destination of the

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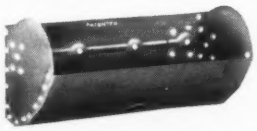

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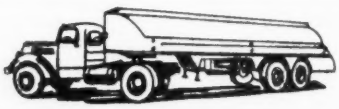

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SOYBEAN OIL HAULING OUR SPECIALTY
Hopper trucks for bulk soybean oil meal.
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Inter and Intra State Tank Truck Operators . Edible Oils
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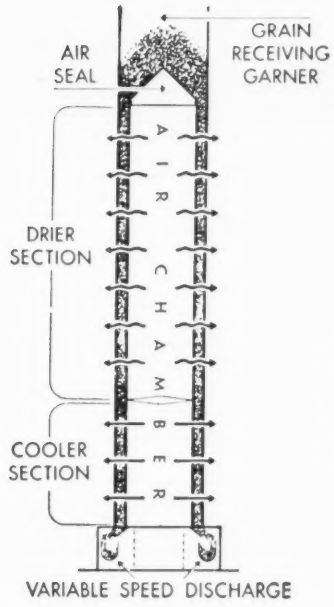
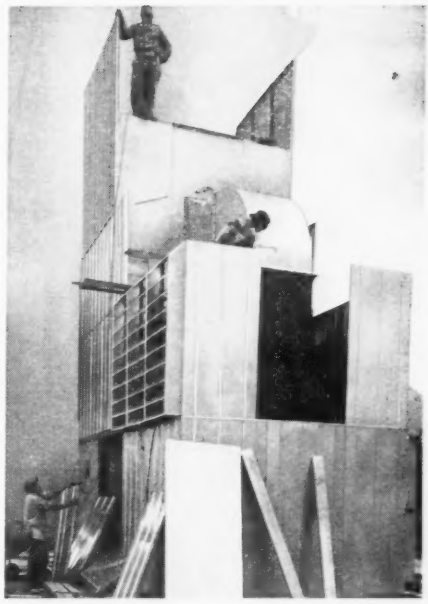


Cut-a-way drawing shows Shanzer's exclusive, narrow screen column design principle. All the grain is near warm air source for absolute drying uniformity and tremendous capacity. All the grain is completely contained; no ledges; no obstruction to either grain or air flow. Complete drying and cooling cycle is open to operator's inspection.

Shanzer installations can readily be custom-fitted to specific plant requirements. All parts are die-punched for true erection and easy interchange. Enclosures are of modular type design. Every installation is permanently registered as to customer, parts and special modifications for fast, accurate, service attention.

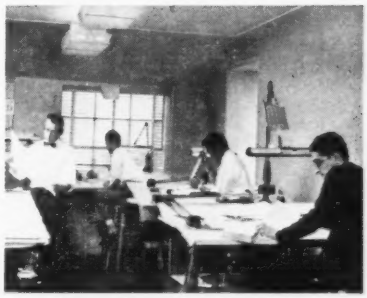


WHY YOU GET MORE FOR YOUR DRIER DOLLAR WITH A SHANZER

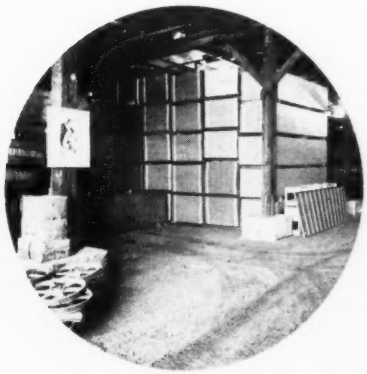
On the job performance value and company service are often cited by elevator owners and operators as reasons for their overwhelming preference of Shanzer drying units.

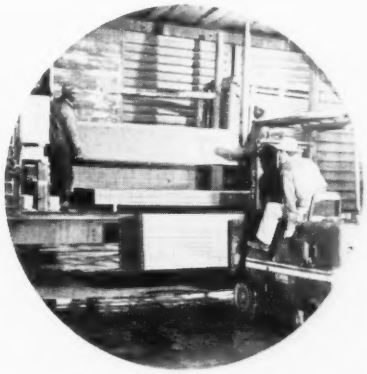
Behind this loyalty is Shanzer's quarter-century policy of specialization in the manufacture of quality grain drying equipment. Owners know that a Shanzer unit means more uniform drying, lower maintenance and operating cost, trouble-free performance and outstanding operating safety.

Shanzer's severest competition does in fact come from other Shanzer units, some a decade or two decades "new," which are still delivering top economy and performance. Talk with a Shanzer owner, see the difference, you'll agree the value buy in driers is a Shanzer.

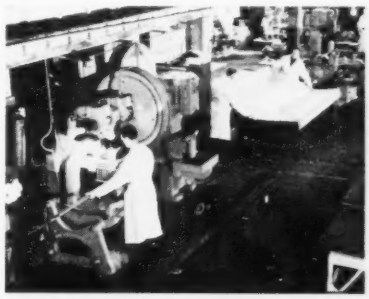


Complete planning assistance on such things as drier layout, flow problems and special handling equipment has saved thousands of dollars for customers in many instances. Shanzer's quarter-century experience and fully staffed engineering department are at your call.





Fast processing and shipment of your order is another result of Shanzer drier specialization. Fully stocked inventories mean there's no delay in shipment, with the needed unit on the way in most cases within 24 hours!



Specialized manufacturing methods and equipment assure the highest quality obtainable in grain drying machinery. Every part must pass a rigid double check before final clearance, and insurance records show Shanzer driers to have the finest safety rating in the industry.

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grain exported is not shown on the inspection reports, therefore, the quantity of each country may vary from official census data which are based on custom declarations. * For transshipment to European ports.

Soybeans: Inspections for overseas export by ports and country of destination October 1956-September 1957 (1,000 bu.)

Country of destination	Philadelphia	Baltimore	Norfolk	New Orleans	Mobile	Port Allen	Lake ports	Other ports	Total 1956-57	Total 1955-56
United Kingdom	257	728	541	89	.....	.....	.....	.....	1,615	1,585
Belgium	234	1,205	924	1,318	1,351	270	.....	.....	5,302	3,181
Holland	1,244	1,480	2,057	10,148	3,430	995	.....	142	19,496	12,269
Denmark	1,125	1,017	492	1,754	.....	63	.....	.....	4,451	3,824
Norway	.....	477	499	439	.....	.....	.....	.....	1,415	860
Sweden	446	102	131	.....	.....	.....	.....	.....	679	0
West Germany	314	938	1,318	4,609	1,298	630	.....	.....	9,107	6,552
France	221	188	472	452	.....	.....	.....	59	1,392	1,058
Italy	.....	.....	.....	15	.....	.....	.....	.....	15	29
Israel	363	360	710	774	300	.....	.....	.....	2,507	1,800
Philippines	.....	.....	.....	14	.....	.....	.....	.....	14	0
Japan	26	121	.....	12,643	1,104	10,653	.....	20	24,567	21,117
Formosa	.....	.....	.....	2,097	.....	691	.....	.....	2,788	3,550
Korea	.....	.....	.....	1,625	.....	.....	.....	.....	1,625	1,554
Hong Kong	17	.....	.....	.....	.....	.....	.....	.....	17	0
Poland	.....	.....	.....	.....	.....	328	.....	.....	328	0
Canada	.....	.....	.....	.....	.....	.....	10,146	.....	10,146	6,094
Other	1	.....	.....	8	.....	.....	.....	.....	9	923
Total	4,248	6,616	7,144	35,985	7,483	13,630	10,146	221	85,473	64,396

Data are based on weekly reports of inspections by licensed grain inspectors for overseas export and do not include rail or truck movement to Canada or Mexico. In some cases the ultimate destination of the soybeans exported is not shown on the inspection reports, therefore the quantity of each country may vary from official Census data which are based on custom declarations.

480 AUTHORIZATIONS. The U. S. Department of Agriculture has announced the status of fats and oils purchase authorizations issued to countries which have entered into agreements with the United States under Title I of Public Law 480.

Through Sept. 23, 1957, 62 authorizations were issued for fats and oils totaling about $276 million (including some ocean transportation costs). The breakdown by commodities is as follows: cottonseed oil and/or soybean oil, $181 million; cottonseed oil and/or soybean oil and/or lard, $48 million; lard, $30 million; and other fats and oils, $18 million.

Active purchase authorizations under which purchases had not been completed as of Sept. 23, 1957, follow:

Commodity and country	PA No.	Amount authorized Million dollars	Contracting authorized through
Cottonseed and/or soybean oil:			
Brazil	28-11	1.6	Sept. 30, 1957
Ecuador	29-09	1.8	Nov. 30, 1957
Iceland	40-02	.3	Nov. 30, 1957
Pakistan	15-25	2.4	Nov. 30, 1957
Poland	41-02	.3	Nov. 30, 1957
Spain	17-42	1.4	Oct. 31, 1957
Linseed oil:			
Iceland	40-10	.1	Nov. 30, 1957

PRICES. Average prices for soybeans received by farmers, reported by Agricultural Marketing Service.

Average prices for soybeans as received by farmers, United States 1950 to date [1]

Year	Oct. 15	Nov. 15	Dec. 15	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15	July 15	Aug. 15	Sept. 15	Av.
1950-51	203	254	270	290	308	310	312	313	298	286	271	259	247
1951-52	262	277	283	278	278	276	272	277	302	300	305	283	273
1952-53	271	271	275	269	263	281	281	278	266	244	240	233	272
1953-54	241	260	281	283	297	322	352	355	349	347	323	251	272
1954-55	254	257	257	258	261	254	242	236	232	223	220	200	247
1955-56	208	206	211	219	225	238	263	298	287	247	233	207	222
1956-57	207	227	227	231	225	226	224	223	218	224	227	213*	217

[1] Crop year average prices by states, weighted by production to obtain weighted averages for the United States. Includes an allowance for unredeemed loans. * Preliminary. Agricultural Estimates Division.

CCC SALES of 1957-crop soybeans, reported by USDA.

Commercial sales from Commodity Credit Corp. stocks, Dec. 27, 1956-Aug. 28, 1957

	Quantity domestic	Value	Quantity export	Value
Soybeans, (1,000 bu.)	23,911.7	53,052	244.1	555

STOCKS ON FARMS. Stocks of old-crop soybeans on farms Oct. 1 are estimated at 3.7 million bushels by Agricultural Marketing Service. This compares with about 2 million bushels on farms a year ago and the 10-year Oct. 1 average of 2.5 million bushels.

Disappearance from farms during the July-September quarter amounted to 33.1 million bushels, the highest of record for the quarter and about six times larger than for the same quarter last year. July 1 farm stocks were relatively high and with an active demand for soybeans, farmers disposed of most of their supplies before the large 1957 crop was ready for market. Nearly two-thirds of the U. S. carryover farm stocks are in the three states of Indiana, Illinois and Minnesota.

Old crop soybean stocks on farms Oct. 1 (1,000 bu.)

State	Average 1946-55	1956	1957	State	Average 1946-55	1956	1957
N. Y.	6	4	6	Md.	23	16	44
N. J.	8	3	15	Va.	25	20	29
Pa.	22	11	16	W. Va.	.....	.....	.....
Ohio	291	292	156	N. C.	47	25	134
Ind.	250	219	782	S. C.	13	28	15
Ill.	555	498	675	Ga.	2	7	21
Mich.	21	.....	42	Fla.	(1)	.....	.....
Wis.	13	10	26	Ky.	14	12	6
Minn.	233	220	788	Tenn.	19	9	8
Iowa	535	362	305	Ala.	5	22	.....
Mo.	220	100	196	Miss.	14	24	12
N. Dak.	6	14	108	Ark.	36	44	54
S. Dak.	30	28	129	La.	4	.....	.....
Nebr.	19	.....	17	Okla.	3	.....	2
Kans.	37	17	30	Texas	.....	.....	6
Del.	10	10	34	U. S.	2,464	1,995	3,657

[1] Less than 500 bushels.

STOCKS. Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday or Saturday preceding date of report (1,000 bu.)

	Oct. 1	Oct. 7	Oct. 15	Oct. 22
U. S. soybeans in store and afloat at domestic markets				
Atlantic Coast	125	146	152	176
Gulf Coast	1,515	699	470	1,141
Northwestern and Upper Lake	39	66	612	1,492
Lower Lake	1,681	4,291	7,172	9,769
East Central	441	1,139	2,062	2,430
West Central				
Southwestern & Western	497	502	579	714
Total current week	4,298	6,843	11,047	15,722
Total year ago	7,081	11,442	16,945	19,835
U. S. soybeans in store and afloat at Canadian markets				
Total current week	0	0	0	62
Total year ago	0	31	217	405
Total North American commercial soybean stocks				
Current week	4,298	6,843	11,047	15,784
Year ago	7,081	11,473	17,162	20,240

Primary receipts (1,000 bu.) of soybeans at important interior points for week ending:

	Sept. 27	Oct. 4	Oct. 11	Oct. 18
Chicago	742	1,804	3,890	3,184
Indianapolis	146	665	881	910
Kansas City	123	393	891	389
Milwaukee	.....	97	.....	.....
Minneapolis	7	58	444	309
Omaha	11	8	91	49
Peoria	85	168	242	225
Sioux City	17	.....	19	21
St. Joseph	67	294	256	107
St. Louis	119	454	400	309
Toledo	74	375	.....	1,150
Wichita	.....	.....	1,184	.....
Totals	1,391	4,316	8,298	6,653
Last year	5,000	7,436	8,027	5,919
Total Chicago soybean stocks	1,655	3,970	6,310	8,417

INSPECTIONS. Soybeans inspected by grades and percent, reported by Agricultural Marketing Service.[1]

Grade	Oct.-Sept. 1955-56 1,000 bu.	Pct.	Oct.-Sept. 1956-57 1,000 bu.	Pct.	September 1956 1,000 bu.	Pct.	August 1957 1,000 bu.	Pct.	September 1957 [2] 1,000 bu.	Pct.
No. 1	63,575	21	56,561	18	7,241	21	4,619	19	4,240	30
No. 2	145,394	49	132,539	41	15,463	45	10,421	42	6,560	47
No. 3	61,095	20	69,196	22	7,303	22	5,891	24	2,072	15
No. 4	23,065	8	40,986	13	3,423	10	2,833	12	858	6
Sample	6,822	2	17,775	6	717	2	736	3	312	2
Total	299,951	100	317,057	100	34,147	100	24,500	100	14,042	100

[1] Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,750 bushels. [2] Of the September 1957 receipts, 650 bushels were Black, 1,750 Mixed and the remainder Yellow soybeans. Inspections of soybeans in September included 4,408 bushels as cargo lots, 1,301,653 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed grain inspectors at all markets.

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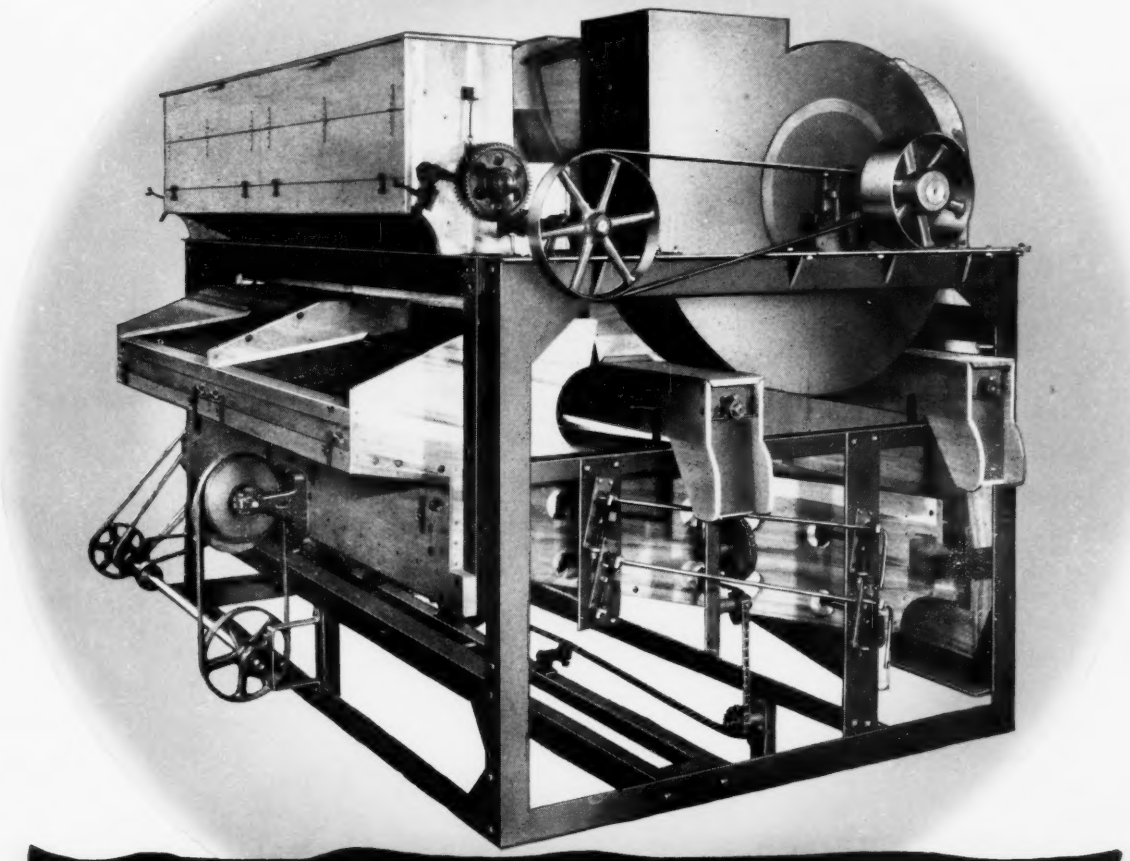

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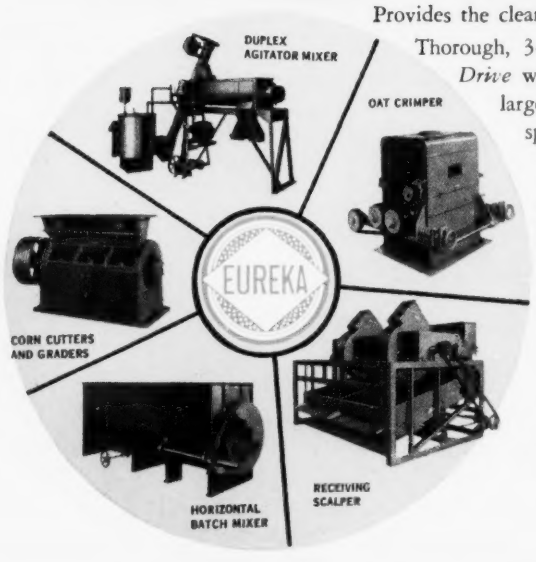

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